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ABSTRACT

The study reported in this document investigated the feasibility of using an interactive multimedia computer environment to build the information base and decision-making skills of mildly mentally handicapped youth with the aim of combatting drug abuse behaviors. This report covers phase 1 of a projected 3-phase study. Its four chapters provide a general overview, a description of phase 1 activities, a description of the design plan, and a conclusion. Phase 1 activities included a literature review, review of existing products, a design team meeting, hardware and software review, solicitation of industry support, and creation of a preliminary design document. The design plan focuses on target audience, design principles, topic areas to be covered, product components, and design components. Appendices making up the bulk of the document contain letters of support from potential publishers, a list of literature review citations, an existing product review, and a summary of a design team meeting. The literature review contains bibliographic information and abstracts for 28 published resources and bibliographic information only for 76 resources. The existing product review lists and briefly describes 35 computer-based instruction and interactive videodisc systems, 57 videotapes and related media products, and 46 printed materials. Twenty references are included (JDD)

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FINAL REPORT – PHASE I

INVESTIGATION OF INTERACTIVE TECHNOLOGIES FOR A RISKY BEHAVIORS PROGRAM FOR MILDLY MENTALLY HANDICAPPED YOUTH

FOR
SBIR CONTRACT #RS89071004

MACRO
macro systems inc.

EC 232182

FINAL REPORT - PHASE I

INVESTIGATION OF INTERACTIVE TECHNOLOGIES FOR A RISKY BEHAVIORS PROGRAM FOR MILDLY MENTALLY HANDICAPPED YOUTH

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FINAL REPORT – PHASE I

INVESTIGATION OF INTERACTIVE TECHNOLOGIES FOR A RISKY BEHAVIORS PROGRAM FOR MILDLY MENTALLY HANDICAPPED YOUTH

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Mr. Robert Korn, Video Software Associates, Inc.
Dr. Jay Sivin, Interactive Educational Systems Designs, Inc.

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Chapter I. Overview

I. Purpose

Macro strongly believes that currently available microcomputer technology can be a valuable tool for combatting drug use and other risk behaviors. While adolescents in general are more likely than any other age group to become involved in risk behaviors, it appears that mildly mentally handicapped youth are at an unusually high risk of this involvement. Typically, these young people possess an inadequate knowledge base, inaccurate information on the likelihood of serious consequences, and poorly developed decision-making skills. We feel that a well designed program which makes use of currently available multimedia microcomputer technology can be effective in supporting existing traditional programs by providing opportunities to acquire accurate information and learn and practice decision-making skills.

II. Funding Source

This view that technology may be effectively used for this purpose was shared by the U.S. Department of Education National Institute for Disability and Rehabilitation Research (NIDRR). Through its Small Business Innovation Research (SBIR) program, Macro received funding for this Phase I study to investigate the feasibility of using an interactive multimedia computer environment to build the information base and decision-making skills of mildly mentally handicapped youth. This Phase I study was conducted in anticipation of proceeding in Phases II and III with multimedia software development, testing, and marketing.

III. Phase I Objectives

The objectives to be accomplished during the Phase I feasibility study were to:

- Investigate the specific needs for developing a computer-based instructional program which focuses on decision-making skills in the context of risky behaviors for mildly mentally handicapped youth.

- Prepare preliminary designs for a hypermedia/videodisc program to provide instruction in decisionmaking skills and information on the possible consequences of risky behaviors.

- Determine the hardware system for delivering the instructional program and the software with which to develop it.

- Prepare and disseminate the final Phase I design specifications report.

IV. Summary of Phase I Accomplishments

During Phase I project staff were successful in establishing the need for and feasibility of the proposed development project through:

- Reviews of the literature and existing products,
- Consultation with our advisory Design Team members,
- Assessment of the capabilities of currently available delivery hardware and development software, and
- Enlisting the support of computer hardware and software publishing industry representatives. (Letters reflecting this support appear in Appendices A and B.)

We have concluded Phase I with a clear understanding of the following aspects of the proposed development effort:

- Target audience,
- Topic areas,
- Anticipated product,
- Guiding design principles, and
- Principal design components.

Chapter II. Phase I Activities

I. Literature Review

The purpose of the review of the literature was to aid us in:

- Precisely defining the target audience which would be most likely to benefit from a prevention focused information and skill building program;
- Clearly defining the risk behaviors which might be most appropriately treated in such a program; and
- Identifying appropriate strategies for transferring knowledge and decision-making skills in an interactive multimedia microcomputer environment.

In order to accomplish this we examined research in the following areas: general discussions of adolescent involvement in risk behaviors; research results on the effectiveness of substance abuse prevention/intervention programs for adolescents; adolescent sexuality; adolescent involvement in accidents; and techniques for teaching decision making, enhancing self-efficacy, or otherwise effecting behavior change in adolescents. Immediately following is an overview of the literature review. Selected abstracts and a complete bibliography are provided in Appendix C.

Adolescent Risk Behavior Overview

Adolescence is a period during which individuals are making decisions in a number of important areas. Among these are decisions about whether or not to engage in behaviors which put them at increased risk of death or significant injury, either in the short or long term.

An examination of the causes of mortality and morbidity among adolescents reveals that the major ones are behavioral in nature (Millstein & Irwin, 1988). Although adolescence is typically a period of excellent physical health, adolescents are the only age group in the United States for which mortality rates have actually increased since 1960 (Elder, Stern, Anderson, Hovel, Molgaard, & Seidman, 1987). Accidents, particularly motor vehicle accidents, which are frequently associated with substance abuse, are the major cause of death and significant injury for this age group (Rivara & Mueler, 1987).

Because of their lack of experience in decision making and the importance they place on conformity to peer group norms, adolescents as a group are more likely to become involved in potentially risky behaviors than other age groups (Millstein & Irwin, 1988). However, there is evidence that certain adolescents are more likely than others to engage in potentially damaging risk behaviors (Pearl, Bryan & Herzog, 1988; Ried, Martinson & Weaver, 1987; Brower & Anglin, 1987; Newcomb

& Bentler, 1989). Additionally, Jessor (1987) and others have suggested that these risk behaviors do not occur in isolation but tend to cluster within individuals in a pattern which has been called "Problem Behavior Syndrome." Adolescents prone to becoming involved in multiple risk behaviors share certain characteristics and values including placing a low value on academic achievement, having a low expectation of achieving academically, and having low levels of both self-esteem and self-efficacy (Jessor, 1987).

These characteristics are also typical of mildly mentally handicapped adolescents. These students frequently come from homes in which little importance is attached to academic achievement. They often associate with peers who do not do well in school and tend to place little value on academic learning. And, because of their disability, these students do not themselves do well academically. Partially as a consequence of this, they tend to have low self-esteem (Polloway, Epstein, & Cullinan, 1985) and a diminished sense of self-efficacy (Gresham, 1984). Thus mildly mentally handicapped adolescents are at especially high risk for engagement in risk behaviors.

During the past 20 years, health educators and others interested in risk behaviors in adolescents have tried a variety of approaches in programs developed to prevent or modify these behaviors. Many of these programs have been based on various social-psychological theories, most notably Bandura's (1977) Social Learning Theory and McGuire's Social Innoculation Theory, and have emphasized various components such as knowledge and attitudes (antecedents), refusal and problem solving skills (behaviors) or reinforcement and punishment (consequences) (Elder, Stern, Anderson, Hovell, Molgaard, & Seidman, 1987). Frequently these programs, are aimed at reducing various combinations of the risk behaviors which are included in Problem Behavior Syndrome.

During this same period, it has become apparent that prevention programs, generally targeted at younger students, are more effective than prevention/intervention programs targeted at older adolescents. As a result, prevention programs have typically targeted what have been called the "gateway" drugs, primarily cigarettes, alcohol, and marijuana (Newcomb & Bentler, 1989). The programs in schools have typically focused on one of three major approaches:

- providing students with knowledge and information about substance abuse,

- development of refusal skills and social life skills, ranging from the "Just Say No" to efforts to enhance peer interactions, social skills, and self-esteem, or

- a combination of the two (Tobler, 1986).

Unfortunately, however, traditional programs aimed at preventing or modifying substance use have met with only very limited success (Hansen, Malotte, & Fielding, 1988; Newcomb & Bentler, 1989; Tobler, 1986). In fact a recent meta-analysis found that no approach to drug prevention or education had any appreciable effects and called for new methods to reduce demand for alcohol, tobacco and other drugs among teenagers (Bangert-Drowns, 1988).

The use of microcomputer simulations is one new method currently being tried. Within the past few years, a number of programs focusing on the prevention of drug use have become available (Weaver, 1988). A number of these are simulations of one of the subtypes described by Bell-Gredler (1988). All simulations share the characteristic that there is no right-wrong feedback given. Instead, simulations show students the effects of their chosen action on the problem. Problem situations continue to evolve based on choices made by the student. This makes simulations an especially appropriate medium for instruction in areas which are extremely complex or ambiguous--such as decision making in the area of substance use. Furthermore, the use of this type of indirect feedback, that is consequences of decisions, eliminates the need to use scare tactics or overt preaching, which have been found to be particularly ineffective in drug education programs (Newcomb & Bentler, 1989).

The actual impact of computer-based simulations on reduction of engagement in risk behaviors has been studied to a very limited extent. However, Kahn's study (1987) indicated that skills which are important for resisting pressure to engage in risk behavior can be significantly improved through the use of a computer-based simulation which models behaviors and shows their consequences.

Almost all of the work to date has focused on students in general education programs in upper elementary and secondary schools. Few studies have targeted special education students, who appear to be at special risk for involvement in these potentially damaging behaviors based on the identified risk factors described above. An exception is a study of the effectiveness of a general health behaviors simulation in developing health related problem solving skills in mildly handicapped students (Woodward et al., 1986). In this experimental study, both the experimental and control groups received regular classroom instruction together for a 2-week period. Following this, the control group participated in application activities related to the content presented during the 2-week instructional period while the experimental group worked with the computer simulation. The content of this simulation was highly correlated with the classroom instruction. On the basis of the results, the authors concluded that computer simulation appears to be effective in teaching material not easily taught by conventional means, such as problem solving skills related to health behaviors.

However, few computer-based simulations have been developed with the special needs of mildly mentally handicapped students in mind. Many of these simulations demand reading skills which are beyond the capabilities of most mildly cognitively impaired students. For example, the simulation used in the Woodward et al. study requires at a minimum a sixth grade reading level (Woodward et al., 1986).

Recently, a fully voiced interactive videodisc simulation aimed at the prevention of drug and alcohol use has been developed by TARGET, a service organization of the National Federation of State High School Associations (National Federation of State

High School Associations, 1988). In the TARGET simulation, the consequences of choices are depicted visually. The simulation proceeds as students make decisions about the behavior of the simulation's characters.

Although the knowledge about the effect of such programs on attitude change is limited, videodisc does seem to be the ideal medium in which to foster change in attitudes. The consequences of decisions are happening to real people, not computer graphics. This means that interactive videodisc has the capability of making a strong emotional impact, much like the best educational films which deal with risk behaviors. However, in addition, a well structured videodisc simulation environment affords each student the privacy to acquire the information that he or she feels is needed to make responsible decisions.

II. Review of Existing Products

The review of existing products was conducted to ensure that our proposed development project did not duplicate a product already available. Although we had anticipated only looking at microcomputer software and interactive videodiscs which focused on one or more risk behaviors, we extended our review to an examination of products in other media which treat these topics. The document which resulted from this review appears in Appendix D of this document.

Overall, it can be said that there is a considerable amount of material available which is in some way related to risk behaviors, health maintenance or making life choices. The formats in which these materials are published include traditional print materials, videocassette and related media such as film strips, computer-assisted instruction of various types (e.g., tutorial, simulation, game), and even one interactive videodisc.

A variety of approaches are taken in these products. Some attempt to prevent or modify behaviors solely through the presentation of information about potential damage and risk. Others present information only peripherally, and focus instead on making a strong emotional impact. Still others attempt to build skills which may lessen the potential for involvement in risk behaviors. These skills include decision-making, coping and refusal skills. Others attempt to get to the source of the problem by focusing primarily on the building of self-esteem and the improvement of self-concept.

In general, the approaches of the various materials currently available are based on one or more of the approaches that have been used in programs to prevent or modify risk behaviors, such as:

- Increasing information about risk behaviors;
- Building skills which may help students avoid becoming involved in risk behaviors (e.g., refusal and coping skills); and
- Building self-esteem.

The existing products treat risk behaviors in various combinations. The selection of material to be covered appears to be somewhat dependent upon the general approach of the instructional program within which the material was designed to be used. The most typical combinations of subject matter for materials in all media are:

- The drug cluster -- alcohol, tobacco, and other drugs;
- The sex cluster -- Sexually transmitted disease and pregnancy;
- One behavior at a time -- narrowly focused on one topic such as smoking or cocaine use; and
- Implicity -- within the context of a total health or skill building program, where risk behavior prevention is not the apparent purpose of the program.

We were particularly interested in studying the characteristics of the computer-based materials which we located in the course of the review, since these were most directly related to our project. We discovered that the existing CAI programs are of various types including tutorials, simulations, and games. Several existing programs had multiple modules, and so have more than one of these instructional modes included within a single program. The CAI programs most often dealt specifically with substance abuse. Total health, lifestyle decision making, or sexually transmitted disease was the primary focus of the remaining CAI programs.

Almost all of these programs were designed to be used with normally achieving students at various points in schooling from the upper elementary grades through high school. Because of this, there is considerable reading required in most of these programs. While the amount of reading required in most of these CAI programs is probably not a problem for nonhandicapped students, it is often a significant impediment to learning with mildly mentally handicapped students, and may make many of these programs unsuitable for use with this audience. The one CAI program which was designed to keep the reading at a relatively low level (3rd-4th grade) contains no graphics, and is a straightforward tutorial with no simulation activities and no branching.

The one interactive videodisc which we located has some significant advantages over the traditional CAI programs. The presentation of the Target Interactive Project (TIP) includes high quality audio and full motion video which makes the problem situations far more realistic and concrete, while at the same time significantly decreasing the need for reading. However, this program is designed for high school age normal adolescents, and does not explicitly provide factual information, decision-making skills instruction, or supporting skills (e.g., refusal and coping skills) instruction.

III. Design Team Meeting

The design team consisted of the following individuals:

- Dr. Louise Appell, Macro Systems
- Dr. Carolyn Harris, Macro Systems
- Mr. Dave Keefe, IBM Educational Systems
- Mr. Bob Korn, Video Software Associates
- Ms. Elaine Robey, Macro Systems
- Dr. Jay Sivin, Interactive Educational Systems Design
- Ms. Kate Wholey, Macro Systems

The design team meeting was conducted on December 7, 1990. Prior to this meeting, the consultant design team members were sent copies of abstracts of important articles, the review of existing products, and a letter communicating the tenative agenda for the meeting. At the beginning of the meeting each member of the Design Team received a copy of the agenda and the overview on the subject of adolescent risk behavior which appeared in the Literature Review section.

The goal of this meeting was to:

- Precisely define the scope of content to be covered in the proposed multimedia computer-based program; and

- Define the overall approach, structure, and features of the program.

The meeting was extremely helpful in clarifying the thinking of Design Team members. Numerous topics were discussed, and the unique perspective and knowledge of each consultant Design Team member was invaluable. A full overview of the Design Team meeting appears as Appendix E. The following are major conclusions which emerged from the work of this meeting:

A. Conclusions About Audience

The most likely audiences, based both on need and on current status and short term projections of equipment availability, would appear to be in cities and in suburbs surrounding large cities. This makes it especially important to consider multicultural audiences as the program is developed.

It seems most appropriate to target this program toward upper elementary (grades 5 and/or 6) through middle school age (grade 8) mildly mentally handicapped students. However, this program may also be very appropriate for at-risk students with low academic skills.

The program should be developed to maximize its usefulness by individual students and/or small groups. However, consideration should be given to how the program might also be used effectively with large groups.

It is not necessary to include characters with obvious handicapping conditions in the video segments. However, the characters should represent a broad range of interests and abilities so that each student using the program will find at least one character with whom he or she can identify.

B. Conclusions About Content

The content area on which the program should focus is risk behaviors involving substance use and abuse.

The primary focus of the program should be the development of good decision-making and other skills which may lessen the student's chances of becoming involved in substance abuse and improve the chances of healthy social-emotional development.

C. Conclusions About Instructional Approach

The subject matter of the disc lends itself to a simulation approach. Thus, the primary focus of the disc should be on scenarios which provide opportunities for decision making. However, there should also be access to a decision skills tool to support decision making.

Other tools should also be available to the student at various times in the program. These could include tools presenting information and strategies for refusal and coping skills, and a data base containing information relevant to making decisions in the area of risk behaviors. Some or all of these tools should be available up front when the student first enters the program as well as during the simulations.

IV. Hardware and Software Review

Interactive videodisc has certain inherent qualities which have made it particularly attractive to educators for over a decade. These include:

- The capability of full interactivity equivalent to that in the best traditional computer-assisted instruction (CAI) programs,
- The ability to present real-world images in both full motion and still form,

- The capability to provide realistic sound rather than robotic speech through access to its dual audio tracks, and

- The ability to combine text and graphics from the computer program with photographic quality images from the videodisc itself.

However, there is a range of capabilities in currently available videodisc delivery hardware and in development software. There is no perfect option suited to all situations. Rather, in each case, a decision must be made for the particular audience and the particular type of application being developed. This decision is complicated by the rapid pace of change in this field. New and more powerful hardware and development tools are becoming available at an increasingly rapid rate. Thus, in order to make an appropriate decision about the delivery system and development software, a review of available technology products for both delivery and development of interactive videodisc was an essential part of this feasibility study.

During the development of our design, it became apparent that the following were important features of the delivery hardware and development software for a videodisc related to risk behaviors targeted at upper elementary and middle school aged mildly mentally handicapped children:

- *Ability to present all images, both graphic and video on a single screen.*

  Due to the complex structure of the anticipated program, it seems that a two-screen system would be an unnecessary cognitive burden, given that single screen systems are available.

- *Intuitive user interface.*

  Due to the critical nature of the learning that we hope will take place in this environment, it seems appropriate to minimize the expenditure of effort necessary to interact with the system.

- *High degree of flexibility in the authoring software.*

  This simulation program will be quite complex. Therefore, to allow for the development and interaction of the simulation and the program's tool set, highly flexible and powerful authoring software will be required.

Decisions about authoring software and delivery hardware are intimately connected. The decision about one cannot be made without consideration of the capabilities of the other. However, below is a brief summary of the decision making process used to make these decisions for this project.

A. Hardware

We gave consideration to both Apple Macintosh and IBM PC/XT/AT and compatibles and PS/2 models, both with and without the InfoWindow touch screen monitor. We limited our consideration to products of these two companies because these are the most widely accepted and available computers in the United States. We felt that it would be most appropriate to develop our product for a system which is relatively widely available now and shows promise of being a leader in the near future.

Both modular Macintosh computers (e.g. Macintosh II/IIx/IIcx/IIci) and IBM AT and PS/2 models can support digital video using a digital video adaptor card. These cards with an appropriate monitor allow the presentation of video, text, and graphics on a single screen. However, the quality of digital video images is noticeably lower than the quality of analog video images. We were particularly interested in making the scenarios and decision points as lifelike as possible. Therefore, we decided that the state of the art in digital video was not yet advanced enough for this particular project.

We briefly considered two screen systems, which also can be set up with either Apple Macintosh or IBM AT and PS/2 computers, but quickly concluded that such a system would be unmanageable for our audience, given the complexity of this particular program. We felt that we needed a single screen system along with the capability of presenting high quality video images.

In addition, we felt that a touch screen interface would be superior for this application. The touch screen provides a sense of immediacy in interacting with the computer that is missing with other forms of user input. This immediacy, this sense of synchrony in working with the computer, seems particularly important when the program deals with sensitive and emotionally charged topics such as substance abuse. A number of touch screen monitors or "heads" are available, including the Sony View system and the Visage system. However, the IBM InfoWindow is currently the industry leader, and in fact, most other DOS based systems currently advertise their products as being "InfoWindow compatible." As a result, we have decided that we will develop our interactive videodisc for the IBM InfoWindow system.

B. Software

We had initially thought that a hypermedia programming tool such as *Hypercard* for the Macintosh or *Linkway* for IBM PC/XT/AT and PS/2 models might be appropriate. However, hypermedia environments can be confusing, and are really most appropriate for learners who are quite independent and self-directed in their learning. While hypermedia environments have great potential, particularly for sophisticated learners, we felt that a somewhat more structured learning environment was more appropriate for our target audience.

Looking at more traditional authoring systems and languages, we considered *Pilot for the IBM InfoWindow, TenCORE, Icon Author,* and *Course of Action.* We concluded that *Pilot* was not a powerful enough language to support our design. *Course of Action* is primarily a Macintosh program, although there are some capabilities for porting programs developed with it over to AT and PS/2 systems.

At this point, we have tentatively decided upon the *TenCORE* authoring language as the development software for this project. It is an extremely flexible and powerful programming *language.* As we anticipate the need for considerable flexibility to build this complex program, *TenCORE* seems to be an appropriate choice. In addition, four members of the Design Team have had considerable experience with *TenCORE.* This familiarity should facilitate Phase II development activities.

V. Industry Support

In order to have an impact in the educational arena and achieve the goals inherent in the funding of SBIR contracts, developed products must reach the market place in commercially available form. In the case of specialized delivery systems, such as an interactive videodisc with touch screen interface proposed for development in Phase II of this SBIR, it is beneficial and cost-effective to solicit support for necessary development hardware and software. In addition, it is clearly important to ascertain the interest of those software publishers who might potentially become distributors of the software resulting from a Phase II SBIR production.

Early in Phase I, Macro staff contacted the IBM Corporation, which expressed high interest in the development of this interactive videodisc product targeted at mildly cognitively impaired adolescents. IBM has agreed to provide at least one complete InfoWindow system, including computer and videodisc player, to be used in the development of this preschool math and science program. Further, IBM concurred with us that pilot testing prototype products is an important step in the whole development process. Since interactive videodisc equipment is not yet readily available in most public schools, IBM has agreed to provide at least six complete InfoWindow systems to be used at field sites for pilot testing purposes. IBM's letter of commitment is presented in Appendix A.

Macro staff also contacted six software publishers, who were asked to indicate the level of interest they would have in the proposed interactive videodisc product. Although all six publishers were very interested in instructional materials focused at middle school level and targeted at building decision-making skills, and they praised the "tool" approach to a more integrated, whole person presentation that we will be using during product development, none of the publishers would be willing to advance funds for this development. Inquiry regarding a completed product, though, produced an entirely different response: five publishers expressed positive projections about the market potential for this product, particularly in school and community drug programs. These five publishers asked for updates on progress of the product if Phase II funding is approved, and they indicated interest in reviewing the final product for possible publication. Publishers' letters of support are contained in Appendix B. It is the feeling of these publishers that growth of interactive videodisc hardware and use in public education is certainly likely to follow paths set by private industry, the military, and other Federal agencies.

VI. Development of Preliminary Design Document

Macro staff Design Team members used information from three principal sources as a guide in developing the preliminary design document. These were:

- The literature review,
- The Design Team meeting, and
- Follow up contacts with individual Design Team members.

Also guiding project staff in preparing this design have been:

- The review of existing products in various media, which led to a clearer understanding of how our product might complement existing programs and materials;

- The hardware and software reviews, which informed us of the capabilities of state-of-the art hardware and development software; and

- Staff experience in the development of software for special populations.

Chapter III. Design Plan

I. Target Audience

One critical step in the systematic design of instructional software is clear specification of the intended user. A careful focus on both characteristics and needs of a population should precede any enumeration of target objectives or outcomes and guide the total design process.

Rather than broadly defining the audience as people with generic cognitive impairments, developmental disabilities or mental handicaps, the Design Team sought to focus on a subpopulation -- youth who are mildly cognitively impaired. Often interacting with nonhandicapped peers in mainstream settings, these are the youth most likely to be confronted, in the "real world", with decisions surrounding risk behaviors.

The Design Team then attempted to focus in on a single age range. Although there is news of elementary school aged children dealing or using drugs, the majority of youth are not confronted with such decisions before the middle school years. Youth in grades 5 or 6 through grade 8 are in great need of instruction in decision-making and drug use prevention skills.

Finally, the Design Team decided that the program should focus on youth in urban locales where there is special risk of being confronted with drug use activities. Selection of youth in urban settings also is related to other audience characteristics associated with increased risk for problems with drug behaviors; these are youth who are minorities and those in lower socioeconomic groups.

II. Design Principles

In designing instructional software, the behavioral and learning characteristics of the target audience need to be defined. Then, the translation of those characteristics to features of the program can be achieved.

1) Behavioral characteristics of target audience

- Is highly influenced by peers, and needs to belong to peer group;
- Is experiencing hormonal changes, stressing physical and psychological systems;
- Is increasingly prone to risk taking;

- Has burgeoning awareness of the concept of the future; and
- Has abandoned the notion that human behavior is either good or bad in favor of one that accepts its complexity.

2) Learning characteristics of target audience

- Needs concrete, experientially based learning;
- Is best introduced to the purpose and subject of instruction in context and via a carefully structured overview before instruction begins;
- Responds well to group or team learning; and
- Needs clear directions, expectations, and rules.

3) Characteristics of appropriate software

- **Highly motivating** -- The disc will be highly motivating to youth. Instruction will be effected via multisensory channels using video, graphics and animation. Unvoiced text, if any, will be kept to a minimum and to an appropriate reading level. "Bells and whistles" will be meaningful, and used sparingly.
- **Realistic and reinforcing** -- Characters and scenarios will be carefully constructed for credibility and realism. The use of characters from various ethnic groups will reflect the multicultural aspect of U.S. urban life. A wide variety of situations will facilitate transfer of instruction, and feedback will be useful and appropriate. The program's dual themes of the intrinsic value of individual lives and the necessity for even young people to begin to plan their lives will permeate all facets of the disc.
- **Simple to use** -- The program user interface will use the IBM InfoWindow's touchscreen. Screen design will be attractive and inviting. Users will find the navigation of the videodisc is facilitated by a help function, nearly always available.

III. Topic Areas

The result of much study, thought, and deliberation by the Design Team suggests that an appropriate focus for an interactive program on risk behaviors would be:

- The **process** of developing decision-making skills,

- Within the **context** of drug prevention education, i.e., gaining information, practicing decision-making skills, and developing an awareness of positive alternatives to drug use.

The ability to make good decisions requires supporting skills (e.g., refusal and coping skills) and high self-esteem. Yet, mildly cognitively impaired youth often will react defensively to overt attempts to increase self-esteem. The portrayal of self-worth as a foundation on which good decisions are based is more likely to be acceptable to these youth.

To address the process orientation of this program, the Design Team generated the idea of a set of "tools", which students can access to support their decision making. The supporting tools (described in detail in "Design Components") provide instruction in and opportunities to practice decision making, goal setting, refusal skills, and coping skills. In addition, through tools, the student will be able to determine his current health status using the health profile assessment inventory, and obtain information about the effects of drugs from a multimedia database.

This drug prevention education videodisc will address the following topics:

- Knowledge and attitudes about drug use;
- Strategies for making healthful, responsible decisions;
- Facts about both licit and illicit drugs; and
- Consequences of use (physical, social, emotional, psychological and academic).

Macro recognizes that the full range of interpersonal and behavioral skills such as those addressed by this disc will be gained only in a full course of instruction, not via a single videodisc. The selection of topic areas for this disc was motivated by a commitment to develop a program which encourages and assists a teacher to engage students in meaningful learning experiences that leave lasting impressions. This program will encourage the teacher to establish an environment that is open and conducive to reflection, questioning and debate. We hope that classroom teachers will build on the use of this program and develop additional related classroom activities such as role-play.

Ideas for practice activities that reinforce student use of the models for component skills will be outlined in the print materials which accompany this program. In addition, ideas for transporting the techniques and skills on which the program is built to exploration of other behaviors that place youth at risk will be suggested.

IV. Products

The interactive videodisc will be a simulation equipped with tools to guide and support the user. The simulation approach will benefit from the realism possible in the medium. Product components will include:

- A single-sided 12 inch videodisc that contains full motion video, still video images, and all narration and direction. The capacity of a single-sided videodisc is one-half hour of moving video, and two half-hour audio tracks for a total capacity of one hour's audio.

- Floppy disks (both 3 1/2 and 5 1/4 inch), containing the program which directs the course of the videodisc, supplementary graphics, and a management system which includes access to customization options.

- Documentation explaining hardware requirements, the disc's customization feature, loading and operating instructions, lesson plans that supplement and extend instruction offered in the disc, and suggestions for using the program effectively.

V. Design Components

As mentioned earlier, a set of tools will be available within the program to guide and support the development of decision-making skills by students. Entry to the program, character and goal selection, instruction in decision making, and simulations comprise the balance of the program.

A. Entry to Program

Student entry to the program will be controlled by a password, perhaps a series of numbers (known only to the student) touched on an on-screen number bar.

Upon startup the student will be able to choose to:

- Continue a previous session,
- Explore one of the tools, or
- Initiate a new session via the simulation.

A student using the program for the first time will see a complete introduction, including orientation to the content of the program and directions for interacting with the computer system. On subsequent occasions, the user will be reminded briefly of the content of and interface for the program.

It is important to note that the ability to resume a simulation requires a recordkeeping system. However, information on decisions made previously by the student will be accessible to no one but the student. This knowledge, shared with the student, will free the student to explore the subject matter without fear of what another might think. Additional discussion of the management system appears as "I" of this section.

B. Character Development and Selection

Characters with whom most students can identify will be developed. Included in character development will be obvious characteristics such as gender, personality type and cultural background. Subtle characteristics, crucial to the realism of the disc, will be similarly identified, including family or household structure, community institutions with which the character associates, group activities and support structures, and occupation of breadwinners of the household.

Personality characteristics of models will be carefully developed to ensure that most users can easily identify with at least one character. Main characters will include individuals with the following predominant personality characteristics:

- Requires immediate gratification,
- Unthinkingly conforms to the group,
- Has an attitude problem, and
- Is shy.

The characters will all be related in some way, perhaps sharing something impersonal and externally imposed, for instance, a bus stop. An initial scene will reveal qualities of each character (e.g., family life or academic standing), so that students will have an opportunity to decide with whom they identify most.

C. Goal Selection

Goals are important for guidng responsible behavior. Therefore, to guide the student's thinking when making decisions in the simulations, the student will be given the opportunity to select a goal from a list of goals upon entry to the program. The overall goal of living a healthful, responsible life will be inherent in all of the goals from which the student will choose. Each goal will additionally have subgoals associated with it.

In the process of establishing the set of goals and subgoals to be included, the degree of specificity needed to convey the usefulness of a goal in terms of promoting a sense of self-worth also will be determined. Categories for goals will be selected to ensure the development of the whole personality. Broadly defined goals ("surviving adolescence" or "preparing for adult, independent life"), will be refined with more specific attainable subgoals. For instance:

- Be successful in work
    - Get a part-time job.
    - Acquire a particular skill.

- Become physically fit
    - Bench-press body weight.
    - Run 3 miles.

- Develop recreational pursuits
    - Attend community- or church-sponsored youth group.
    - Join community athletic league.

- Become involved socially
    - Make a new friend.
    - Do something nice for a relative.

- Be successful in school
    - Do well on an assignment.
    - Finish high school.

D. Instruction on Decision-Making Strategies

Students will be told that one of the most important decisions they will face in the near future is whether or not they will use drugs, both licit and illicit.

A single model for instruction in decision making will be chosen or created. A memory aid for the model (e.g., a mnemonic trigger) and situations requiring decision making will be demonstrated and discussed. Examples and non-examples of decision making opportunities will be given, and practice will be offered.

E. Scenarios

Decisions involved in the avoidance of drug use are difficult, and they are made not once but many times. In order to be credible, the program must include a realistic number of decision points and allow multiple opportunities for practice. The method of substance abuse education we have chosen, combining access to information and opportunities for practice of decision-making skills, has proven to be more effective than either method on its own.

The scenarios in which the student will have the opportunity to make decisions, will be very realistic. Input from counselors at target schools concerning activities available to target youth will be solicited to identify realistic opportunities for making decisions.

Possibilities for settings of scenarios include:

- The first day of school;
- The introduction of a new student in school;
- Encounters in school bathrooms, the "real testing ground" for youth;
- Places students go when they leave school to cut classes;
- Hanging out with friends over a weekend; and
- Final exam week.

It is important to strike a balance between the extremes of consequences of drug use. The capability of the interactive videodisc program to allow for a range of outcomes, from the minor negative consequences sometimes related to a single instance of exploratory drug use to the extremely negative results possible from any drug use, will substantially affect the program's reception. Simplistic treatment of the risk behavior may be dismissed by many youth. Experimentation with drugs by youth is often associated with a strong curiosity and desire to be like peers. They may hold a view that nothing bad will happen to them if they try drugs, and their personal or vicarious experiences may reinforce this notion that a single episode of drug use does not have dire consequences. As part of the task of determining an acceptable balance of the depiction of consequences for this program, statistics on first-use versus prolonged drug abuse will be sought to support instruction.

F. Branching

Macro's goal is to make the scenarios realistic and, at the same time, meaningful in terms of enhancing students' decision-making skills. Given this, several possibilities exist for the structure of the program. Under current consideration are the following.

- The program proceeds parallel to a youth's daily activities (waking; getting ready for school; going to, being in, and coming home from school; interacting with family; going out or talking on the phone with friends).

- Progress through the program could be divided between first use and subsequent use of the program. In this case, the first time through, the user would make choices without interference; the course of the program would simply reflect the user's choices. However, for subsequent times through the program, the flow would be interrupted at decision points to query the user on his or her thought processes as he or she makes decisions. In the case of faulty or uninformed reasoning, tools could be suggested, one of which the learner would have to choose and apply before proceeding.

- Alternatively, regardless of the cycle of use, the program could interrupt every decision to query the user on why a decision was made as it was. Under this structure, before proceeding, the user would have to select a valid reason from a list of potential reasons. A structure such as this would cause the user to consciously consider each decision and select a reason that matched the action she or he had taken. This structure, however, must be weighed carefully as it may be overly burdensome and frustrating.

Another decision to be made is how the element of time is best manipulated to help the youth make the connection between decisions made now and the choices that will be available to him or her in the future. The program could begin with the future and allow the student to choose a past to match it, or begin with the past and present and have the student work toward a future goal. Which method has the most impact on youth will be determined and used to guide the program's flow.

G. Tools

When a tool is accessed for the first time by a student, its purpose will be explained. Its use will be demonstrated by a simple model, and examples will be offered with which the student can practice. On subsequent use, the student will be able to short-cut to the model or to examples. These tools include:

- A decision-making tool,
- A goal-setting tool,
- A refusal skills tool,
- A coping skills tool,
- A health profile tool, and
- An information gathering tool.

1) Tool: Decision-Making Skills

Besides being the focus for the entire program, decision-making instruction will be the focus of a tool. This tool will present a generally useful model of making decisions. An example of such a model is the following:

- Orient to the situation. (What is going on here?)

- Generate alternative solutions. (What are my choices?)

- Generate consequences of each solution. (What could happen if I ... ?)

- Compare consequences to goals. (Which consequence gets me closest to priority goals?)

- Make the decision. (Choose an alternative -- Decide.)

- Obtain feedback. (What are the results?)

- Evaluate choice. (How did this situation turn out?)

2) Tool: Goal-setting Skills

The process of setting goals not only helps a student to clarify desires and dreams, but also helps in: evaluating how he or she is doing in the interim before a goal is reached; and motivating its methodical achievement.

One goal-setting model is the following:

- Define priorities and select goals.
- Decide if goal is realistic.
- Decide if goal is long-term, short-term, or immediate.
- If goal is long-term (e.g., becoming a master carpenter), identify short-term goals.
- If goal is short-term (e.g., doing well in shop class), identify immediate goals (e.g., finishing project due Friday).
- Identify behaviors needed to attain immediate goal (complete sanding by Tuesday, design for painting by Wednesday, painting by Thursday).

3) Tool: Refusal Skills

Youngsters today are often approached repeatedly by drug users and need a variety of strategies to extricate themselves. Real strategies obtained from members of the target audience who have successfully avoided drug use will be used. Already identified skills include:

- Identify tone of voice of person trying to persuade you. Is it sincere? Deceitful? Sarcastic?
- Identify reasons why the person might be trying to influence you. (Do they need somebody to do it with?)
- Brainstorm snappy comebacks. (Excuse me? Would I like to kill some brain cells?).

4) Tool: Coping Skills

In today's fast-paced world, contending with conflicting and competing demands can be assisted with specific, learnable skills. Students will be told that there are many problems that are encountered in the course of a lifetime. Solutions need to be found to these problems, but it is important to take pleasure in life too. A good way to avoid drug use is to develop pursuits that provide pleasure. For instance, athletics, arts, religion, community service, hobbies, and music are all areas in which individuals can develop expertise, be creative, and receive positive feedback from peers and family.

Convincing statements about the benefit of developing areas of expertise based on currently available descriptive statistics (e.g., the percentage of adolescents successfully avoiding drugs who participate in athletics) will be included.

Some coping skills that will be included are:

- Identify situations that are frustrating for you.
- Learn deep breathing and relaxation techniques.
- Establish a relationship with a trusted adult to be a mentor and cheerleader.
- Write a letter to the person who hurt you, but do not mail it.
- Scream into a pillow.
- Clean your room.
- Exercise.
- Make something enjoyable (e.g. a good dinner, a drawing for a friend).

5) Tool: Health profile

Learning where one fits in the spectrum of an objective measure such as health is often useful in setting goals. Knowing what one has control over, and what one must accept, can increase one's sense of strength and self-worth. This tool will allow the user to obtain this information easily and confidentially. This snapshot profile will be for the individual's personal use only. Specific health measures may include, for example:

- Use of drugs, including caffeine, nicotine, alcohol;
- Other behaviors placing youth "at risk": sexual activity outside the context of a monogamous relationship, delinquent activity, aggressive behavior, etc.);
- Mechanisms for coping with stress;
- Tendencies to conform to the will of peers;

- Family life; and
- Diet.

6) Tool: Information gathering

This tool will be a multimedia database that the student can use to gather information on drugs and repercussions of using drugs.

Information available on addictive substances will include:

- Immediate main and side effects;
- Effects of prolonged use;
- Effects on fetal development; and
- Federal law for possession and for possession with intent to distribute. (In addition, state and local laws can be researched and entered by end users via the customization option in the management system, further discussed below.)

H. Exit

The video simulations will close with an evaluation of the user's decision making and skill building. The trend exhibited by the student in navigating the program will to a large extent determine the judgment. If he or she was on an upswing, the future is exciting and challenging, and possibilities for growth are open. If he or she was on a downward path, the future appears boring or grim; avenues for further growth have been closed off due to past decisions. These futures will be represented through brief scenes using full motion video.

I. Management System

Due to the sensitive nature of the topics covered in this program, the management system has been designed so that no information about the choices of individual students within the program is available. It is anticipated that the management system will have four major functions.

- *Student registration function, the main purpose of which is to allow students to resume progress through a simulation begun in a previous session.*

  The student registration program will prompt a student logging on for a secret password, known only to the student. For reasons of confidentiality and so that the students can freely explore scenarios, no details of an individual student's experience will be recorded.

- *A group record keeping function which will provide teachers with some information about their students' general level of knowledge related to drug use, thereby facilitating their ability to provide instruction*

  Group statistics, rather than individual statistics, will be gathered to describe student use of the program to instructors. Data on general use of the system by students will be sought. It is anticipated that this information will include:

  - The number of times students navigate the system from beginning to end;
  - The number of times the various tools are accessed; and
  - The number of examples practiced within the various tools before students return to a decision point.

- *A communication function allowing for private communication between students and teachers.*

  A means by which teachers and students can confidentially communicate may also be included. However, teachers and other individuals working in settings which would be appropriate for use of this program will be asked if such a channel of communication would be useful. If reaction is positive, and if there is reason to believe that this tool would actually be used, it will be developed; otherwise this idea will be abandoned.

- *A program customization function, which will allow end users to add their own information (e.g., about state and local drug laws, local youth groups, local sources of addiction treatment) to the program.*

  A final use of the management system will be as a means of program customization. Teachers will be able to enter information on local organizations (e.g., the name and local telephone number and address of Girl and Boy Scouts). Categories established for this reference information will be developed to encourage inclusion of a range of groups.

J. Documentation

An important part of any computer application is the documentation which accompanies it. Full user documentation will be developed which describes:

- Installation of the program;
- Entry into and operation of the program;
- Content coverage and approach;

- All features of the management system;
- Factual information contained in the multimedia database; and
- Supplementary classroom activities which would be appropriate to reinforce the content of this program.

Chapter IV. Conclusion

During Phase I, project staff have developed a preliminary design which:

- Specifies a target audience, for whom an appropriate interactive videodisc dealing with drug-related risk behaviors and decision making is not currently available;
- Is based on a clear understanding of the behavioral and learning characteristics of the identified target audience, and characteristics of software appropriate for this audience;
- Focuses clearly on a single topic, that is substance use and abuse, which is critically important to the future lives of these students;
- Attempts to build skills and knowledge which are essential for long-term healthy adjustment and avoidance of substance abuse; and
- Provides tools which support students in their efforts to learn and educators in their efforts to structure effective drug abuse prevention programs.

The preliminary design which has been developed is quite complex. It reflects the complexity of the problem itself. This document is based on considerable thought by many individuals interested in developing a program which can make a difference in the lives of mildly handicapped adolescents. We believe that this document is a sound basis from which to begin Phase II development activities.

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Appendix A

Letter of Support From IBM Corporation

IBM

Washington Center for Technology in Education
IBM Educational Systems

Suite 501
11300 Rockville Pike
Rockville, MD 20852
(301) 571-1425 FAX (301) 571-1457

April 11, 1990

Dr. Carolyn DeMeyer Harris
Macro Systems, Inc.
8630 Fenton Street, Suite 300
Silver Spring, MD 20910

Dear Carolyn:

I am pleased to learn that Macro is pursuing Phase II funds from the Small Business Innovation Research (SBIR) program for the development of an interactive videodisc product to assist mildly cognitively impaired adolescents in developing and building decision making skills in the area of risky behaviors such as drug and substance abuse. Your preliminary interactive videodisc design, completed during the Phase I feasibility study shows a program that not only provides factual information for the learner to use in decision making but also allows him or her to practice goal setting skills, refusal skills, and coping skills. I believe that your proposed product will be a valuable learning tool for young adolescents. It should also be helpful as a preservice training aid for counselors, teachers, and other professionals preparing to work with the target population.

Macro's standard product development approach that includes a formative evaluation stage is consistent with the approach which has been taken on IBM study projects in education; we feel that it is very important to promote teacher and student participation and input in the design and development of innovative educational products. Such cooperative arrangements between developers and organizations that provide educational services to youth are essential to the production of materials that meet the intended users' needs and actually work in instructional settings.

If Macro is successful in obtaining the SBIR Phase II funds, I will be pleased to arrange for loan of a complete IBM Multimedia/ Videodisc system for the development of the risky behaviors decision making program. Further, when the program is ready for pilot testing, I will assist you in identifying appropriate field test sites which have the necessary equipment installed.

I look forward to a continuing working relationship with you and your staff, and hope that your Phase II application receives approval. Please keep me informed on your progress.

Sincerely,

David D. Keefe, Program Manager

Appendix B

Letters of Support From Potential Publishers

**Communication
Skill Builders**

**Therapy
Skill Builders**

3830 E. Bellevue/P.O. Box 42050
Tucson, Arizona 85733

(602) 323-7500

March 28, 1990

Carolyn DeMeyer Harris, Ph.D.
Macro Systems, Inc.
8630 Fenton Street, Suite 300
Silver Spring, MD 20910

Dear Carolyn:

Your proposed interactive videodisc decision making program for mildly handicapped adolescents sounds great. There continues to be a great need for materials to help youngsters make healthy decisions in the area of drug use. Your approach sounds as if it addresses the sensitive nature of the content, acknowledges the individual's need for privacy, and offers many opportunities to practice building better decision making skills.

Communication Skill Builders is committed to product development for students with handicaps. However, it is unlikely that we would be able to provide the funding required for this type of product. This is an unfortunate circumstance, but one that developers and producers of educational materials are acutely aware of.

Please keep me posted as your project progresses. We have a growing interest in videodisc programs, and I am sure we would like to evaluate the final product.

Sincerely yours,

Sandra S. Grafton

Sandra S. Grafton
Vice President

/bjr

FOCUS

839 Stewart Avenue, P.O. Box 865
Garden City, New York 11530
Phone: (516) 794-8900
FAX: (516) 794-8920

April 11, 1990

Carolyn DeMeyer Harris, Ph.D.
Macro Systems, Inc.
8630 Fenton Street, Suite 300
Silver Spring, MD 20910

Dear Carolyn:

I enjoyed talking to you about your proposal for SBIR Phase II funding to "Develop an Interactive Videodisc for Use by Young Mildly Cognitively Impaired Adolescents to Build Decision Making Skills as Related to Risky Behaviors." Focus Media is a leader in the field of educational materials for adolescents, involving various audiovisual and computer software media.

As a technology-oriented publisher, we also are paying serious attention to the growth of educational interactive videodisc programs. In working with you on the physical science simulations series, we have grown to understand the standards of excellence which accompany the work your company produces.

It is our philosophy to pursue the development of supplementary materials (audiovisual and computer software) in curriculum and guidance areas. The context of drug prevention education makes this especially appealing to us as this has been a recent area of growth in our product line. Some of our recent software titles in this area have included: Alcohol: Making the Choice, Protecting the Unborn Child: Pregnancy and Alcohol, The Great Knowledge Race: Substance Abuse, Health and Safety with the Diddely-Dop Gang, and our recent video, Alcoholism.

One area of concern, of course, would be the limited amount of funding that a commercial publisher, such as Focus Media, can commit for the development of this type of product. However, we would be very interested in following the progress of your development project and in reviewing the final program for possible publication. It will be very interesting to see the effect of this program on the drug behaviors of adolescents.

Please be sure to keep us informed about the outcome of this project. We wish you the best of luck with your effort.

Sincerely,

Seth C. Grenetz
President

SCG/bh

knowledge unlimited inc.

P.O. Box 52, Madison, WI 53701-0052

1-800-356-2303
In WI (608) 836-6660

Ms. Carolyn DeMeyer Harris, Ph.D.
Macro Systems, Inc.
8630 Fenton Street, Suite 300
Silver Spring, MD 20910

April 9, 1990

Dear Ms. DeMeyer:

I read with great interest your proposed interactive videodisc program for mildly impaired junior high school students. Not only will it significantly impact youngsters with handicaps, but it will also would be valuable for all adolescents. The fact that the program emphasizes sound decision making activities that allow learners to explore and practice skills make what I believe will be a valued educational tool.

While I am supportive of your endeavor, I regret that we would be able to consider funding development of the program. As an educational publisher, however, Knowledge Unlimited, Inc. would be interested in examining the developed materials for possible distribution in our catalog of educational resources.

I wish you well on your project; please keep me informed of your progress.

Sincerely,

Judith Laitman

Judith Laitman
President
Knowledge Unlimited, Inc.

mecc

3490 LEXINGTON AVENUE NORTH, SAINT PAUL, MINNESOTA 55126-8097 (612) 481-3500

April 9, 1990

Carolyn DeMeyer Harris, Ph.D.
Macro Systems, Inc.
8630 Fenton Street, Suite 300
Silver Spring, MD 20910

Dear Carolyn:

I was very impressed with your proposed videodisc decision making program for mildly handicapped adolescents. You have included some promising components in your preliminary design and the use of this technology in this area has much potential. Unfortunately, we would not be able to commit any funds toward the development of this product.

As you know, our MECC Etc. (Emerging Technologies in the Classroom) catalog already has a sizeable catalog of videodisc products, and we are interested in continued growth in this technology. Our philosophy is to lead teachers in integrating the latest technological advances into their classrooms. We would be very interested in following the progress of your development project and in reviewing the final program for possible publication. Best of luck with this endeavor.

Sincerely,

Melanie Smith
Research Analyst
Product Development

Appendix C

Literature Review

Appendix C: Literature Review

Selected Abstracts

Alper, S. (1985). The use of teacher questioning to increase independent problem solving in mentally retarded adolescents. *Education and Training in Mental Retardation*, 20, 83-88.

Four levels of teacher questioning corresponding to stages in problem solving (identification, explanation, inference, and generalization) were used with moderately and severely handicapped students at a public high school. Responses were measured both in school and vocational settings.

Additionally, in the introduction, the author mentions five operations or stages that are generally considered tooccur during successful problem solving. They are: 1) general orientation or attitude toward problem situations; 2) problem definition; 3) generation of alternative solutions; 4) decision making; 5) verification or obtaining and utilizing feedback about the particular solution selected (from D'Zurilla, T.J., and Foldfried, M.R. (1971). Problem solving and behavior modification. *Journal of Abnormal Psychology, 78,* 107-126).

A study mentioned in the introduction by Zetlin and colleagues indicates that adult-child interactions play an important role in the development of problem solving. Initially, a child approaches a problem depending on others for cues and assistance, but gradually the child learns to rely more on his or her own resources ("self-regulation"). The nature of the strategic assistance provided a child is crucial in shifting from other- to self-regulation.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191-215.

Using people with different types of phobias, Bandura presents self-efficacy as a major determinant of behavior. He finds that persistence in activities that are subjectively threatening but, in fact, relatively safe produces, through experiences of mastery, further enhancement of self-efficacy and corresponding reductions in defensive behavior.

Efficacy expectations and outcome expectations differ. Efficacy expectations operate between a person and his behavior. Outcome expectations operate between one's behavior and the results.

People avoid situations which they believe exceed their coping skills. Given appropriate skills and adequate incentives, efficacy expectations are a major determinant of people's choice of activities, how much effort they will expend, and of how long they will sustain effort in dealing with stressful situations.

Once established, enhanced self-efficacy tends to generalize to other situations in which performance was debilitated by preoccupation with personal inadequacies, although the generalization is to situations most similar to those in which the self-efficacy was restored.

Phobics benefit more from seeing models overcome their difficulties by determined effort than from observing facile performances by adept models. With perseverance, even the most anxious people can eventually succeed. Similarity to the model in other characteristics, which increases the relevance of vicariously derived information, can likewise enhance the effectiveness of symbolic modeling.

Modeled behavior with clear outcomes conveys more efficacy information than if the effects of the modelled actions remain ambiguous. Diversified modeling (i.e., using multiple models), is superior to modeling by a single behavior. If people of widely differing characteristics can succeed, the self-efficacy of observers is increased.

When experience contradicts firmly held notions of self-efficacy, the self-efficacy is difficult to change. If lots of props are used, or the situation is in other ways contrived, and the behavior is successful, people will attribute their success to external factors.

Use induction procedures initially to develop capabilities, then remove external aids and use self-directed mastery to strengthen and generalize expectations of self-efficacy.
After people have demonstrated self-efficacy behavior, they should continue "extensive self-directed performance" to reduce their susceptibility to relearning defensive patterns of behavior.

Efficacy expectations are defined and measured independently of performance, thus providing an explicit basis for predicting the occurrence, generality and persistence of coping. Discrepancies between efficacy expectations and performance are most likely to arise under conditions in which situational and task factors are ambiguous. Social learning theory determinants of self-efficacy can be varied systematically and their effects measured.

The concept of expectancy is assuming an increasingly prominent place in contemporary psychological thought. Self-efficacy is not locus of control. While causal beliefs and self-efficacy refer to different phenomena, causal ascriptions of behavior to skill or to chance can mediate the effects of performance attainments on self-efficacy.

The greater the increments in self-perceived efficacy, the greater the changes in behavior. Likewise, the more frequently observed performances, the greater the behavioral changes.

Self-efficacy was a uniformly accurate predictor of performance on tasks varying in difficulty with different threats regardless of whether the changes were produced through performance accomplishments (89% congruence) or by vicarious experience along (86%).

Bandura, A. (1978). The self system in reciprocal determinism. *American Psychologist*, 344-358.

Behavior, cognition and environmental factors continually act on and are acted upon by each other. Behavior is not just a by-product of cognition and the environment but another factor influencing subsequent behavior. People create their environments via their choices and actions. Their efficacy and outcome expectations influence how they behave, and environmental effects created by their actions alter their behaviors and expectations. Cognitive factors determine in part what external events are observed, how they are perceived, whether they have lasting effects, etc., in short, what influence the event has.

The influence of each of the factors varies by individual and by situation. Uni- or bi-directional explanations of behavior are not sufficiently complex to explain human behavior, nor is computer modeling. A major challenge to the investigation of self-regulation processes is that people do not react mechanically to situational influences - they actively process and transform them. A reinforcing stimulus is simultaneously a response and an initiating stimulus.

Expectations influence interchange, more so over the long-haul than the short. Expectations can shape external realities. Goal setting influences behavior. Performance attainment provides an important source of efficacy information which alters people's choice of activities, how much effort people will expend, and how long they will persist in the face of obstacles.

Although one would expect that actual consequences influence behavior, in fact, expectancies are a stronger influence. This ongoing interrelatedness is the basis for the theory of reciprocal determinism in social learning theory.

Bandura adds another source to his previously explicated "take" on information sources: inference (in addition to enactive, vicarious and social sources of verification). After people acquire some rules of inference, they can evaluate the soundness of their reasoning and derive from what they already know new knowledge that extends beyond their own experience.

An individual regulates his or her behavior via observation and self-performance, judgments and comparisons made about previous performances and those of peers and in response to previous performance.

"... Self-monitoring and goal setting are indispensable constituents in the process [of self-regulation].... A large body of evidence exists showing that people who reward their own behavior achieve significantly higher levels of performance than those who perform the same activities under instruction but receive no reinforcement, are rewarded noncontingently, or monitor their own behavior and set goals for themselves but do not reward their attainments.... In fact, it is difficult for people to monitor their performances without setting goals for themselves and responding evaluatively to their performance."

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37(2), 122-147.

Performance is a compilation of several elements: knowledge, transformational operations, and component skills. But people do not always behave optimally, so there must be additional factors interacting between knowledge and behavior. Bandura has identified self-referent processes, or self-efficacy, as that element.

Self-efficacy influences performance. People may perform above, at, or below their capabilities as a result of the influence of their self-perceptions. In fact, perceived self-efficacy is at times a better indicator of subsequent behaviors than prior performance itself. It affects how much effort will be invested in a given activity and what level of performance is attained. Judgement about one's capabilities, in part, determines one's choice of activities and the rate at which skills are acquired.

Judgments of self-efficacy are based on four principal sources of information: performance attainments, vicarious experiences of observing the performances of others, verbal persuasion (and allied types of social influences), and physiological states from which people partly judge their capability, strength, and vulnerability.

Performance attainment is the most influential of these sources. Vicarious experiences are second; these convey information about the nature, predictability and controllability of environmental events. Models enacting the behavior teach effective strategies for dealing with the challenging situation. Persuasive influences have the greatest influence on people if the heightened appraisal is within realistic bounds. Physiologic states, generally stress-induced, often impede performance.

In studies of people quitting smoking, the higher the perceived self-regulatory efficacy, the more successfully the smoking habit was kicked. In contrast, neither demographic factors, smoking history or degree of physical dependence on nicotine differentiated relapsers from abstainers.

Bandura turns to incentives, both external and internal, as primary influencers of behavior. At first, he posits, most activity is unrewarding, and not intrinsically of interest to the learner. External incentives are used to shape behavior, fostering task mastery and performance accomplishment. These incentives are insufficient in themselves for the behavior to continue. Performance accomplishment must be meaningful in order to maintain attention. Then, as time passes, one begins to set subgoals, which heighten interest in the task. At length, knowledge and skills from such activities become personally satisfying to the learner. Interest is stimulated by fulfilling internal standards, and self-efficacy is gained.

Goal setting is an important aspect of this process. Self-motivation is best summoned and sustained by adopting attainable subgoals that lead to large future ones. Proximal (short-term, attainable) goals provide immediate incentives and guides for action. Serving as measures against which an individual judges how he or she is doing, and providing markers of progress, these subgoals make the task intrinsically interesting to the learner. In a study of mathematical operations, children were divided into three groups: one was given proximal subgoals, one distal goals and a third no goals at all. With proximal subgoals, the children learned rapidly, choosing to work on math problems while on a break, and achieving substantial mastery of mathematical operations. Distal goals had no effect, nor did no goals. Regardless of treatment conditions, self-percepts of moderate to high strength were positively related to interest. An aside at the close of this section indicates there may be a time lag between newly acquired self-efficacy and corresponding growth of interest in activities that are disvalued or disliked, but over a period of time, mastery experience and its resulting self-satisfaction is conducive to growth of interest.

Bandura also looks at perceived self-inefficacy, and a sense of futility. Self-efficacy theory distinguishes between two judgmental sources of futility: People can give up trying because they doubt that they can do what's required, or they may know their capabilities are sufficient but give up because they expect their efforts to produce no results due to an unresponsive environment. The first, low self-efficacy and an unresponsive environment lead to resignation and apathy. A high self-efficacy and an unresponding environment, though, can lead to social activism and protest.

Bell, D., Feraios, A.J., and Bryan, T. (n.d.). *Learning disabled adolescents' knowledge and attitudes about AIDS*. Manuscript submitted for publication.

An AIDS survey questionnaire was administered to 34 LD and 44 NLD adolescents in one suburban and three urban high schools. It assessed their knowledge about AIDS and their attitudes about issues related to AIDS. While the results found no differences between the LD and NLD students in knowledge about AIDS, the LD reported feeling less control about their exposure to AIDS and indicated less behavioral change due to the threat of contracting AIDS.

In the questionnaire were: 30 factual items in Yes/No or True/False format and 23 items on attitudes (including 15 in a Likert format and 5 in judgmental terms (right v. wrong).

There were no differences between LD and NLD students in knowledge about AIDS. LD Hispanic youth knew more about street gangs. LD youth report significantly higher rates of sexual activity. The only significant effect for attitudinal data was found in the category of Behavioral Accommodation. On this scale, LD youth had lower scores than NLD peers, indicating they felt less control over the factors that leave an individual open to AIDS infection.

As in earlier social cognition studies, these results suggest that even if LD and NLD adolescents have similar levels of knowledge, the LD students may not necessarily choose to behave in adaptive or socially appropriate ways. In the case of AIDS, this could have potentially fatal consequences.

Brantlinger, E. (1988). Teachers' perceptions of the sexuality of their secondary students with mild mental retardation. *Education and Training in Mental Retardation, 23*, 24-37.

Lack of information and training in sexuality can have serious consequences for mentally retarded people, but adolescents are hesitant to discuss related issues, and information is difficult to gather from their parents because of the parents' misinformation and anxiety about their children's sexuality.

Of the 22 teachers interviewed, 22 stated that their pupils lacked accurate information about sexual topics, but lower income students were thought to be more likely to be street-wise regarding sex, and more active. Teachers felt for the most part middle-income students were overprotected by their parents, and were often discouraged from being in relationships. (Some parents even went so far as to make their children dress in baby clothes and out-of-date styles so they'd be less attractive to their peers.)

Many teens were unaware of the consequences of their sexual behavior -- even those who were sexually active wouldn't use birth control regularly to avoid an unwanted pregnancy.

Female students were described as having narrow sex role definitions; teachers were unable to interest girls in careers because they thought of themselves as wives and mothers. Many felt it was "wrong" to use birth control and plan for sexual encounters. They thought they had to "give in" to male demands for sex, and one teacher noted the "most important part of their female identity is to be defined as 'sexually attractive' by the males."

Most of the teens thought of sex as a "dirty, backstreet thing," or "something to be ashamed of." Sex was tied to recreation and exploitation rather than part of being in a loving relationship. Teachers estimated that 75 to 80% of their students were sexually active, and in fact pregnancy was viewed as a status symbol. Because many of their peers were sexually active, and many of the kids were followers, many teachers felt their students were in danger of being taken advantage of.

"Lack of experience with evaluative thinking and decision making were thought to be real problems" (p. 33) ... The vulnerability described by teachers not only included unequal and humiliating relationships with peers, but also what might be described as more serious, or at least illegal, forms of abuse. Twenty (91%) of the teachers who were interviewed claimed to have had students who had been sexually abused, frequently by family members or friends of the family.

Brower, K.J., & Anglin, M.D. (1987). Adolescent cocaine use: Epidemiology, risk factors, and prevention. *Journal of Drug Education*, 17(2), 163-179.

Epidemiological studies of adolescent cocaine use are critically reviewed, risk factors for use are identified, and implications for prevention are discussed. Cocaine use among adolescents is increasing due, in part, to lower prices and the availability of "crack," a potent smokable form of freebase cocaine. Although most use ends after mild to moderate experimentation, some users develop severe adverse consequences in a short period of time. Risk factors for initial cocaine use have been identified as male gender, use of marijuana, lack of social connections to family and school, peer influences, and psychopathology. However, further studies are needed to identify risk factors for developing more extensive cocaine use, including possible underlying biological factors. Prevention efforts should be targeted at preadolescents who show high risk characteristics. Parents, educators, and health care providers should all be involved in prevention programs, to provide a consistent message in the home, the school, and the popular media. Effective techniques that address the identified risk factors are required to maximize the success of prevention efforts.

Browing, P., White, W.A.T., Nave, G., and Zembrosky-Barkin, P. (1986). Interactive video in the classroom: A field study. *Education and Training in Mental Retardation*, 21, 85-92.

"Asking for Help" is an interactive video-based curriculum that is theoretically grounded in cognitive behavior modification, which holds that one way to transform a person's thinking strategies is initially to teach the person to vocalize effective problem-solving processes. The video simulates realistic problems in different settings and provides positive and negative models in requesting assistance. Small groups facilitated students helping each other in discussion, decision making and role playing.

Students made statistically significant gains from pre- to posttest scores on both the Curriculum Knowledge Test and the Curriculum Application Test. Teacher reactions were also favorable. Moderately handicapped students and students labeled TMR were more likely to show appreciable learning gains on the Knowledge Test. One explanation posited was that those students began the curriculum further from mastery, and could thus make larger, rapid gains.

Brubaker, R.G., & Tonetta, L.L. (1987). Smokeless tobacco use by middle school males: A preliminary test of the reasoned action theory. ***Journal of School Health*, 57(2), 64-67.**

This study identified psychosocial variables associated with smokeless tobacco use within the context of the reasoned action theory. One hundred twelve male students, ages 10-14, completed a questionnaire that operationalized components of the theoretical model. Multiple regression analyses revealed intention to use smokeless tobacco correlated significantly with attitude toward the behavior and perceived social pressure. As predicted by the theory, significant differences between those who intended to use smokeless tobacco and those who did not were found on several outcome and normative beliefs. The data support the utility of the theory as a means of explaining smokeless tobacco use. Results of this study must be interpreted with caution, however, because the study represents a preliminary investigation and the sample was small and not representative of all adolescent males.

Bryan, T., and Pearl, R. (1987). ***Learning disabled students' conformity responses: A replication.*** **Manuscript submitted for publication.**

LD youth are similar to non-LD youth in conformity to prosocial behavior (e.g., helping a neighbor, selling raffle tickets for a benefit). In antisocial behaviors (e.g., cheating, defacing school property, stealing or "borrowing" without permission, taking illicit drugs), LD youth are more likely to conform. Subjects were caucasian, middle to upper socioeconomic status junior high students. Students were asked to imagine themselves as having other plans or an attitude of reluctance to do that which was suggested by a peer. Main effects in the analysis of variance indicated that girls were more willing to conform, and that LD youth were more willing to commit antisocial acts.

Carter, J., Browning, P., Nave, G., & White, W.A.T. (1985). Interactive video as a learning medium for mentally handicapped adolescents. ***Journal. of Special Education Technology*, 7(1), 12-20.**

This study was designed to determine whether (1) different types of informational feedback (i.e., error correction) affected learning performance; and (2) interactive video was an effective instructional medium with mildly handicapped adolescents. Twenty-six subjects were matched in pairs based on a pretest score and age and then randomly assigned to two groups. The respective group mean IQs were 58 and 60. The learning task consisted of responding to a 10-item true/false learning module on budgeting (Social and Prevocational Information Battery (SPIB)--Budgeting Subtest). Each subject was taught individually in a single session. Each of the 10 items would reappear in the interactive video instructional session until the subject responded to that item correctly two consecutive times or until the subject erred on the item a total of three times. Items were presented iteratively to minimize simple memorization of correct responses. The results indicated this medium was effective in that significant learning occurred for both groups. However, there were no differences between subjects introduced to the more extended (Group A) versus briefer (Group B) form of informational feedback.

Cole, P.G., & Gardner, J. (1988). **Effects of goal-setting on the discrimination learning of children who are retarded and children who are nonretarded.** ***Education and Training in Mental Retardation, 23*****, 192-201.**

"Children diagnosed as retarded and nonretarded at the same level of vocabulary and perceptual competence were required to complete a series of five-choice discrimination tasks. An experimental group was given feedback and provided with goals for achievement which were set as accelerating standards on a tower of lights. A control group was not given feedback and not required to strive for such standards. Results indicated that the feedback and accelerating-standards condition did have a positive effect on learning, but only during the second half of the series of trials. It was also shown that the children who were nonretarded attained a higher level of learning than the subjects who were retarded, also during the second half of the training period. Implications for teaching and training are outlined."

In the introduction to the experiment, the authors summarize research on the effects of expectancy on learning:

> If a child expects to succeed and values the goal object, then motivation is internalized as a strong drive for achievement. On the other hand, if a child expects failure or perceives the goal of learning to have low value, then the result is lowered motivation and a weak drive for achievement. It is also well documented that success and failure affect motivation to strive for goals. Prior experiences of success and failure influence a child's expectancy for outcomes and affect motivation to achieve. Success and failure also influence the individual's perception of the incentive value of particular goals.

Research has also indicated that goal-setting procedures have a positive effect on the learning of adolescent subjects who are retarded.

The authors briefly describe a study by Masters, Furman and Barden (1977): The subjects were 4 and 5 year old nonretarded children. The learning task consisted of sets of 3-choice color-discrimination problems; there were 9 trials. Subjects were assigned to one of four groups, a low-standards condition, in which subjects were told the desired goal was 4 of the 12 responses; a medium-standards group, in which the goal was 8 of the 12 responses; a high-standards group, in which the goal was 12 of the 12 responses; and an accelerating standards group, in which the first goal was set at 4 correct, and each subsequent trial required subjects to get one more correct than the previous trial's goal. By the last trial, the high-standards and accelerating-standards groups had essentially mastered the task. The medium and low-standards groups made mild and few gains, respectively.

A second experimental variable was reinforcement: contingent upon attainment of the achievement standard or self-dispensed. The advantage of the accelerating standards method was again evident. The effects of the four standards conditions were relatively similar under self-imposed reinforcement, gaining near or complete mastery by the final trial. The success of these procedures was the focus of this study using retarded and nonretarded children.

In this article, the authors explain the experiment they conducted. The task was to select from a series the line drawing that was "different." An accelerating standards group received both feedback and reinforcement through a tower of lights that lit up when the goal was achieved. A control group received neither feedback nor encouragement to set or attain a goal. It was only after 40 trials that a difference favoring the accelerating standards/feedback condition began to emerge. Both subjects who were retarded and those who were not responded to the accelerating standards procedure. The control group for retarded children made no learning gain, indicating that practice alone is not sufficient for learning increases. The control, nonretarded group did make gains, but not as marked as the gains experienced by the accelerating standards group.

Dunnigan, K. (1989). Diagnosis, treatment, and prevention counseling for high-risk youth. *Focus: A guide to AIDS research*, 4(4). [Electronically received via the Community Educational Service Foundation, Arlington, VA.]

The author is medical director for an urban center for runaway and homeless youth. The goal of this project is HIV infection prevention via counseling.

"The process of counseling high-risk adolescents involves at least three steps: assessing the cognitive development of the client and the factors that promote risky behaviors, understanding the factors that may encourage changes in risky behaviors, and defining the counselor's own feelings about the issue involved."

In assessing the client's ability to assess their risks, counselors must know at which stage of cognitive development the youth is functioning. Conceiving future consequences entails a formal, abstract level of thinking. If the youth has not reached that stage, the counselor needs alternative means of reaching the youth.

"The chances of changing a youth's behavior from high-risk to low-risk will improve if the adolescent perceives the change as rational and relevant, and if low-risk behaviors have peer support, appeal to an adolescent's emotions, and appear to confer some immediate advantage."

Change is also more likely to occur if the adolescent believes they are taking the initiative and if the counselor is perceived as knowledgeable, nonjudgmental, trustworthy, and "cool." Counselor's modeling of behavior (e.g., sexual orientation, history of chemical dependency, HIV status) helped counselors to establish rapport with the client. In this author's experience, the participation of persons with AIDS evoked a strong emotional response from the youth.

Elder, J.P., Stern, R.A., Anderson, M., Hovell, M.F., Molgaard, C.A., & Seidman, R.L. (1987). Contingency-based strategies for preventing alcohol, drug, and tobacco use: Missing or unwanted components of adolescent health promotion? *Education and Treatment of Children*, *10*(1), 33-47.

Since 1960, there has been an increase in mortality in the 15-24 age group. Main cause of death is auto accidents, and substance abuse is implicated in over half of all fatal accidents. Initial efforts to combat substance use and abuse among adolescents focused on providing direct knowledge relating to short and long term effects of substance use, with the goal of influencing attitudes toward substance use (e.g., slides of diseased lungs and livers and fatal traffic accidents). These are based on the belief that knowledge and attitude change will result in behavior modification. Another approach to health education is sometimes termed "psychosocial innoculation" and focuses on the development of behavioral skills which facilitate resisting peer pressure. "Cigarette smoking and alcohol and drug use appear to be functionally similar in that the initiation of each behavior constitutes an alternative (and negatively sanctioned) approach to seeking social reinforcement" (p. 35). Purpose of this study is to examine studies of substance abuse prevention programs and to classify existing techniques in terms of their strengths and weaknesses.

Description of 39 studies reviewed--Obtained through review of 1983 and 1984 MEDLARS database plus older studies referenced by 2 or more of studies obtained from search. Classified according to whether antecedent (awareness, knowledge building, change attitudes and/or knowledge), behavioral skills training (refusal skills, resisting peer pressure, development of decision making skills, development of problem solving skills, etc.), and consequences (positive reinforcement or punishment) components are present or absent in the programs. Also classified according to target age, change agent, nature of experimental control, key dependent variables and presence or absence of followup. Dependent measures in these studies are often measures of changes in knowledge or attitudes, rather than changes in behavior. There tends to be significantly more use of a behavioral component in antismoking programs than in those targeting alcohol and drug use.

Author's conclusion--Primarily related to future research and development directions. Stresses need for longer followup. "...Given the functional similarities among behaviors associated with drug, alcohol, and tobacco use (e.g., expression of antisocial identification with certain peers), future efforts may include testing whether heterogeneous approaches to preventing smoking and the use of alcohol, drugs, and even smokeless tobacco are more cost effective than "single risk factor" approaches."

Gay, G., Trumbull, D., & Smith, J. (1988). Perceptions of control and use of control options in computer-assisted video in instruction. *TechTrends*, *33*(5), 31-33.

A study was conducted to investigate the effects of students' expectations of control on subsequent performance in an interactive learning environment designed to offer numerous chances for students to modify the delivery of the program. The subjects were 47 undergraduate students with below average overall ability to identify birds in magazines. They were presented with an interactive videodisc program (*Field Identification of Waterfowl*) intended to help students learn to identify seven different kinds of waterfowl as they appear in their natural habitats. The program incorporated numerous design features that allowed students freedom to move around the program in a variety of ways. An initial questionnaire was given to users which included questions to determine whether or not they expected to have their learning directed or imposed by the computer program or expected to have responsibility for their own learning performance and behavior. Results indicated that students who perceived that they would have control in the interactive lesson seemed to proceed in a more positive and organized manner. Students who felt they would not have control of the program did not explore options that would improve their performance such as help screens, glossaries, and feedback. Therefore, the orientation of the learner may be a useful consideration in determining who might be able to use computer control options effectively.

Hagenhoff, C., Lower, A., Hovell, M.F., & Rugg, D. (1987). Prevention of the teenage pregnancy epidemic: A social learning theory approach. *Education and Treatment of Children, 10*(1), 67-83.

Social learning theory focuses on principles of reinforcement and consequences of behavior to explain the development and persistence as well as changes of behavior. Modeling and imitation processes are powerful means of prompting new behavior, which is then reinforced, often by the social consequences of the behavior, by the community. The authors propose that adolescent sexual behavior and contraception use may be learned by such a process.

The self-efficacy model proposes that undertaking a particular health behavior is dependent on one's perceived ability to perform the behavior "effectively," as well as to derive reinforcement from performing the behavior.

Teen pregnancy is the outcome of a series of developmental actions concerning sexual behavior, intercourse, and contraception. It is likely that adolescent sexual behavior is often without explicit premeditation. Discusses the following factors that influence contraceptive behavior:

Accessibility--to birth control at convenient places and times, free or low cost, and private and confidential.

Social/Cultural Factors--

social class and race--may determine the type of social roles that are esteemed by the community.

family factors--socialization, open communication about sex and contraception.

school factors--generally, school programs are more beneficial, in terms of preventing pregnancy, than "damaging," in terms of encouraging sexual activity.

social skills and peer influence--power of friendship as influence on sexual incidence; modeling by girlfriends as influential as pressure from boyfriends; reluctance or inability to say "no"; fear of giving the impression of planned intercourse.

life career goals--when pregnancy seen as inevitable, increases risk of teen pregnancy; sense of loss of social respect and job satisfaction decreases risk of pregnancy.

knowledge--basic knowledge may be an important contributor to contraceptive use, but knowledge alone is not likely to sustain contraceptive use.

self-efficacy--perception of high self-efficacy is presumed to occur when an individual has had direct experience of his or her effectiveness. Actual experience plays a major role in one's perception of effectiveness. Both actual and vicarious experience may contribute to one's perception.

Each of the above is discussed in terms of approaches to promote effective contraceptive use. Suggests that variables central to the social learning model--basic information, modeling, guided participation, stimulus control of the environment, positive reinforcement, frequent feedback of successful behavior, and cognitive strategies--may lead to a clearer understanding of adolescent sexuality and behavior.

Hansen, W.B., Malotte, C.K., & Fielding, J.E. (1988). Evaluation of a tobacco and alcohol abuse prevention curriculum for adolescents. *Health Education Quarterly, 15*(1), 93-114.

Tobacco and alcohol are the two most commonly used nonprescription, psychoactive drugs in the United States today. It has been estimated that up to 25 percent of all U.S. deaths are tobacco related and up to 11 percent are alcohol related. Due to the limited effectiveness of treatment (intervention) programs, preventing the onset of regular use of substances in the first place appears to be the logical alternative. Based on social-psychological theories (e.g., Bandura's Social Learning Theory and McGuire's social InnoculationTheory), previous studies have shown moderate success in reducing rates of onset of tobacco use. Programs use various strategies, but have featured one or more of the following components: peer pressure resistance training; correction of normative expectations; innoculation against mass media messages; information about parental influences; information about consequences of use (Note: Some programs have included decision-making training, to promote integration of factual information); public commitments; and use of peer opinion leaders. There is reason to believe that the theoretical basis of a program targeted at the prevention of tobacco use, is also applicable to other substances since the relationship between using one substance and the onset of multiple substance abuse has been well documented. The purpose of this study is to determine if the state of the art Tobacco and Alcohol Prevention Program (TAPP) can be implemented successfully using minimally trained instructors with varying levels of skill and commitment.

Two cohorts of 6th and 7th grade students from the Los Angeles metropolitan area. Three school districts in all - 1 ethnically and socioeconomically diverse; 1 middle to upper middle class; and 1 located in a suburb with an extremely high per capita income.

Measures employed (dependent variables) - 102 item questionnaire completed by students before and after implementation of the curriculum. Demographic items included. Questionnaire assessed cigarette and alcohol use during the 30 days prior to administration of the survey.

Author's conclusion - The authors conclude that there was a mild positive effect for the TAPP program in preventing the onset of smoking, though not as strong or consistent as has been reported in other studies. They suggest that programming for substance abuse prevention may be differentially effective based on factors as to whom and by whom the program is being delivered.

Humphress, G.B. (1989). Teaching decision-making skills to young adults who have severe physical disabilities. *The Networker*, 2(4), 9-12.

Severely physically disabled young adults engage in significantly less decision-making practice than do their nondisabled peers. Young people with severe physical disabilities are often not raised or trained to make their own decisions since those decisions are usually made for them by parents, siblings, teachers, counselors, etc. This, in effect, denies them the opportunity to practice the behavioral, social, and cognitive skills associated with personal decision making, and these skills are key to independent living. The author believes that it is critical to practice decision-making skills, in order to acquire them in the first place, and in order to maintain skills that have already been acquired. In addition, practice affects whether or not an individual is likely to make decisions at all as well as how often the decisions made turn out to be correct. Observations regarding various methods for teaching decision-making skills to this population include: (1) the teaching method must be accompanied by many student practice hours; (2) training should aim at increasing the number and improving the quality of practice hours; (3) scores should be assigned to the various attributes of a decision; (4) training should help people think self-referently about how their decisions affect outcomes in their lives; (5) training should stress to parents the importance of permitting the child to make his or her own decisions; and (6) classroom training and homework alone are not enough--personal and community networks are necessary.

Kahn, L.K. (1987). Effects of computer-assisted instruction on selected interaction skills related to responsible sexuality. *Journal of School Health*, 57(7), 282-286.

Human sexuality education programs have been directed toward reducing adolescent sexual activity, rates of adolescent pregnancy and prevalence of sexually transmitted diseases. In the past, impact evaluations have looked for reduction of unintended pregnancies and sexually transmitted diseases and have generally failed to produce positive effects. Knowledge does not guarantee behavior change. More recently, sexuality educators have begun to realize that adolescents need to develop healthy views of sexuality, clarify their beliefs and values related to sexual activity, and develop more effective social skills for handling sexually related situations. Many instructional models for teaching decision making, assertiveness, and interpersonal communication have been proposed. The problem with many is that in most programs it is impossible to explore the consequences of various alternatives in a real world situation. However, the literature on effectiveness and benefits of simulation based CAI indicates that CAI may represent an effective teaching strategy for addressing the missing components in the instructional models used to teach interaction skills.

The purpose of this study was to determine effects of CAI and regular classroom instruction on knowledge, attitude, and behavior related to decision making, and interpersonal communication. In addition, Kahn wanted to determine if the effectiveness of CAI depends on grade, gender, and school-community setting of subjects.

Subjects were 391 7th to 12th grade students in health classes in Illinois and Indiana. Fifty-three percent were 10th graders; two-thirds were white.

Findings were generally positive for the CAI group. There were significant positive effects found for decisionmaking behavior, assertiveness behavior, interpersonal communication behavior, interpersonal communication attitude, decisionmaking knowledge, assertiveness knowledge, and interpersonal communication knowledge. Although there were some variations according to sex, grade, and school-community setting, it was not statistically significant.

The author concludes:

> "At the very least, the risk-free private environment provided by computers may offer a satisfactory setting for some secondary school students to practice interaction skills related to responsible sexuality. Similar practice using role playing and other group activities could be embarrassing and unrealistic for some adolescents. Required public disclosure of attitudes or beliefs also could prevent adolescents from responding honestly and hinder sincere efforts to clarify beliefs and develop new skills. The computer might offer students an opportunity to examine freely the consequences of alternative behaviors and attitudes with minimal risk to their self-esteem or social status.
>
> "Furthermore, as previous research has shown, these results suggest CAI's role in health education extends beyond improving knowledge. Simulation-based CAI also can positively influence some health-related attitudes and behaviors."

Kelly, B., Carnine, D., Gersten, R., & Grossen, B. (1986). The effectiveness of videodisc instruction in teaching fractions to learning-disabled and remedial high school students. *Journal of Special Education Technology*, 7(2), 5-17.

This study compares the effectiveness of a videodisc curriculum that incorporates principles of instructional design (including discrimination practice and cumulative review) with a traditional basal program designed to teach basic fractions skills. Subjects were twenty-eight high school students, including 17 mildly handicapped students who qualified for the study by showing (a) mastery of whole number operations and (b) less than 50 percent mastery of the fractions skills to be taught. The students were matched in pairs based on a pretest score and math scores from the California Achievement Test, and then randomly assigned to one of the treatments. During the ten-day intervention, observers collected data on levels of treatment implementation and student on-task behavior. A criterion-referenced posttest and two-week maintenance test were administered. The videodisc curriculum resulted in significantly higher posttest and maintenance test scores. Levels of on-task behavior were significantly higher in the videodisc sessions, although levels in both conditions were above 80 percent. An analysis of student error patterns indicated that differences in instructional design features contributed to the relative effectiveness of the two curricula.

Martin, B.L. (1989). A checklist for designing instruction in the affective domain. *Educational Technology*, 29(8), 7-15.

Simple systems for developing instruction in the affective domain are developed. The analysis begins with a needs assessment in student factors, for instance attitudes toward the content and self-esteem. Community attitude, including the beliefs of parents and school board are emphasized. The author also warns that the nature of the content itself, specifically drug use and sex education, may carry by nature heavy affective overlays.

Behavioral objectives have the same three components as cognitive objectives: behavior, conditions, and standards. Behaviors must be stated in observable, measurable terms. Conditions explain the situation, tools and resources, and constraints for performing the behavior during evaluation. The standards or degree statement gives the criteria, qualitative and quantitative, for judging the behavior.

Behaviors are nearly always voluntary, so will often start: The learner voluntarily chooses ... States of behaviors are defined by the degree to which the subject has internalized the behavior. The author uses Krathwohl's continuum to illustrate this internalization, beginning with simple receiving and responding to information to valuing, organizing, and finally adopting as a characteristic of one's personality the behavior under surveillance.

Conditions set up the opportunity for the learner to make the choice mentioned above. Given a choice of x, the student will y. Self-reported data is often used to measure the success of the instruction since it is often difficult for the designer to actually create the situation required.

Standards will often indicate the direction in which the learner chooses to go. The designer will have to determine which is preferred: to reach each student a percentage of the time or a percentage of students all the time. Other standards may clarify how well or how often a behavior is exhibited.

Internalization levels are often helpful in writing standards statements. At the valuing level, for instance, some regularity of response is expected. At the characterization level, near-perfection will be sought. At the receiving level, a statement of how many minutes a learner will attend is acceptable, or this statement may be omitted altogether.

The author discusses the proper sequence for affective objectives, when instruction has multiple objectives. Sequencing should take into account the superordinate relationships among them. Self-development is the highest order affective objective. It requires as prerequisites social competence, values, morals and ethics, and continuing motivation. Values and morals and ethics require attitudes as prerequisites. Continuing motivation requires interest. Attitudes require, as prerequisite, emotions, which require feelings.

The linking of cognitive and affective objectives is generally a matter of common sense. At times the cognitive objectives will be prerequisite to affective objectives, at other times their relationship will be reversed.

External conditions of learning include:

> Model attitudes, values, emotions, etc., that are consistent with the desired behavior;
>
> Use group discussions or role playing to assist learners in seeing different points of view, taking alternative perspectives and verbalizing their own positions;

Use direct reinforcement to establish attitudes, emotions and values when there is consensus on the desired attitude, emotion or value, and to reward cooperation and participation;
Relate learner success to his or her ability and effort, and relate failure to lack of effort;
Encourage learners to set goals for themselves and provide the opportunity to work toward those goals.

Instructional procedures for affective behaviors have some common elements: the development of attitudes and values, self-development and motivation. Use of group processes and social interaction, self-directed learning, providing for success, and modeling appropriate behavior are the mainstays of affective instructional procedures.

Principles for evaluation (a difficult task, at best) include: affective behaviors should not be used to assign grades to students; affective behaviors are voluntary; affective behaviors should be unobtrusively observed.

McCreary Juhasz, M., & Sonnenshein-Schneider, M. (1987). Adolescent sexuality: Values, morality and decision making. *Adolescence*, 22, 577-590.

Values are inferred from an individual's behavior. In groups, values are the normative ideas that guide behavior and provide external and internal standards toward which one strives. Menninger and Pruyser (1967) see values as serving these purposes:

controlling dangerous and destructive impulses,
harnessing constructive energies,
socializing individuals,
clarifying the purpose and the meaning of life,
setting goals for behavior,
fostering adaptation to complex cultural conditions.

Today's adolescents see an adult social world which is sexually interested and sexually active. The feel they are supposed to be experienced earlier, to be more competent at it.

Five hundred youth ages 13 to 19 were surveyed about factors influencing their decisions on intercourse, childbearing, birth control, marriage and parenting. Factors covered physical, emotional, social, and intellectual development of sexual self and partner; practical considerations and career outcomes; attitudes, values and opinions of peers and authority figures; and present and future consequences.

Analysis identified these influences:

family establishment competence
external morality
consequences of childbearing
self-enhancement through sex
intimacy considerations
consequences of marriage

Significant gender differences in decision-making influences reflected a double standard in sexual behavior. Males scored high on self-enhancement through sex, and were more oriented toward impulse gratification. For females, intimacy considerations and the relationship were more important.

Males were influenced more by consequences of child bearing, probably viewing it as negative, while females "may view this more positively." Females showed greater concern for family establishment competence and for external morality. This supports earlier findings that females are more likely to display permissiveness within context of a relationship, and supports the idea that females have a stronger investment in marriage and the establishment of a family.

There were strong racial and cultural differences in the results. Spanish students were more influenced by moral authorities (parents, peers, religious authorities), while black females were least influenced by this factor. Black females were more influenced and white females the least influenced, by the consequences of childbearing. Spanish-speaking males and black females were more concerned over pregnancy. Spanish-speaking teens displayed a need for intimacy, especially the males. Black teens reflected the greatest liberalities and autonomous feelings.

The overriding age-related difference in influence was the weakening effect of external morality over time (for the males, only, though). Another age-related factor is the intimacy found through sex, and consequences of marriage. For the younger females, self-enhancement through sex was influential.

The relation between intelligence and sexual decision making influences emerged as complex. The more intelligent, the less likely was sex viewed as self-gratification, and the more likely sex was viewed within the context of a relationship. Also, the less likely would external morality play a role in the decision made. More cognitively sophisticated teens were less influenced by consequences of pregnancy because contraceptive precautions were taken, or "the intimate nature of the sexual relationship provides a safer atmosphere for pregnancy."

Higher SES teens gave more emphasis to forethought and consideration of the consequences in light of long-term life goals.

The relationship between locus of control and sexual decision making was significant for the males only. Consequences of childbearing and self-enhancement through sex were the two factors involved. The more internally controlled the male, the more likely was he to be influenced in his sexual decision making by the consequences of having a child, while the more externally he was controlled, the more likely self-gratification was the main force.

Pearl, R., Bryan, T., Fallon, P., and Herzog, A. (n.d.). ***Learning disabled students' detection of deception*****. Manuscript submitted for publication.**

The authors refer to an earlier study in which youth were given inadequate clues in a referential communication study. In it, LD youth were less likely to question the speaker. Probes indicated the students recognized the insufficiency of the information they were given, but thought the speaker would have shared all the information he or she had.

Junior high LD youth, (21 LD and 22 non-LD listened to audiotaped stories. In each, an individual made a remark either with an intonation of sincerity, deception or sarcasm. The youth were asked to identify from among these intonations. Of 12 stories, three would contain a deceptive statement; three, a true and sincere statement; and three, a sarcastic statement. The last three would contain an untrue statement in which the speaker's intent wasn't clear.

In this study, the hypotheses were that the LD students would be less able to detect deception than non-LD students, and that there would be no difference in the sarcastic or truthful statement. Each of these hypotheses were found; multiple reasons for these findings were offered.

Pearl, R., Bryan, T., and Herzog, A. (1988). *Resisting or acquiescing to peer pressure to engage in misconduct: Adolescents' expectations of probable consequences.* Unpublished manuscript. University of Illinois at Chicago.

"Adolescents' implicit scripts for situations involving peer pressure to engage in misconduct were examined to determine whether expectations varied as a function of sex, community (urban, primarily black; urban, primarily Hispanic; suburban, primarily white), and learning status (learning disabled vs. non-LD). 198 high school students were interviewed about six situations in which one teenager asks another to participate in misconduct. The students were questioned about how the requests would be stated, what would ensue if the requests were accepted or refused, and what would be likely to motivate the decisions to accept or refuse. Sex, community, and learning status differences were found, particularly in anticipated consequences of refusing the request. The implications are discussed."

Findings included the following:

- No differences among students were found in the specific categories of consequences if the listener agreed,
- A number of questions were directed to ascertain attitudes toward teenage sex and having babies. LD boys felt more strongly than non-LD boys that it is okay for teens to have sex. LD girls were more likely than non-LD girls to indicate that it is likely that they will have babies within the next two years
- LD boys indicated a higher frequency of theft and robbery, including against members of their families. They also reported a higher frequency of having committed these crimes than did non-LD boys.
- When asked about the use of marijuana, tobacco, and alcohol, LD boys indicated somewhat greater use than NLD boys; and LD girls report more frequent use than NLD girls.

The authors note limitations, including self-selection, the limits of self-report data, and the desire to look good in front of researchers.

Reid, L.D., Martinson, O.B., & Weaver, L.C. (1987). Factors associated with the drug use of fifth through eighth grade students. *Journal of Drug Education*, *17*(2), 149-161.

This study examines demographic and psychosocial factors associated with drug use of fifth through eighth grade students (N=873). Nearly 28 percent of the students surveyed reported using cigarettes, alcohol or marijuana in the preceding four months. Associations with drug using peers had twice as much influence on drug use as the adolescent's own favorable drug use attitude. Both variables together explained 55 percent of the variance. Involvement in problem behaviors, beliefs about personal consequences of drug-taking, and adult and peer reinforcement and expectations were statistically significant and accounted for an additional 8 percent of the variance. Finding experimentation with drugs at this early age suggests that drug abuse programs in the schools should begin as early as possible, preferably as soon as they enter school. Associating with drug using peers and favorable attitude toward drug use are consistently reported in the literature as predictors of adolescent drug use. Programs which will change students' perception of the number of their trusted and respected peers using drugs, and which will culminate in the development of unfavorable attitudes about drug use will be the most effective.

Rossi, **R.J. (1986, April). Videodisc technology and training.** Paper presented at the ***American Educational Research Association*, San Francisco, CA.**

This paper considers a research agenda for improving applications of videodisc technology to training that relies upon interactive videodisc-based research tools. Rationales, selected hypotheses, and preliminary steps that should be taken to meet the current and prospective training requirements of industry and the military are discussed with respect to each of four interrelated areas.

Research Area I: Text Supplements

Textual information is often not sufficient and needs to be supplemented with demonstrations and simulations. The videodisc permits the use of these types of supplements in instruction. Therefore, research must experiment with different juxtapositions of text and picture deliveries (e.g., split-screen, one following the other, textual overlays), and must determine the percentages of instructional messages that can be most efficiently delivered by these various media.

Research Area II: Captioning Strategies

It is necessary to examine "enhanced" captioning strategies, which included the uses of colors, graphics, and other visual highlights to designate the importance and relationships among various information items and to provide learners with guides as to where individual bits of information "fit" into the overall instructional sequence. How learners differ in levels of caption-deciphering skills and how these skills may be improved through practice must be subjects of research.

Research Area III: "Silent," Text-Free Visuals

Where possible, elimination of text from training programs increases realism and universalizes training products so that they can be understood by international audiences as well as by audiences with language deficiencies. Since icons are likely to be the keys to communicating nonverbal training materials, more should be learned about the information contents of messages presented using icons.

Research Area IV: Adaptive Strategies

Microprocessor-controlled training systems should, at a minimum, permit learners to select from among several, alternative styles of presentation for the same instructional contents. They should be designed to accommodate themselves to learner characteristics automatically based upon learner response characteristics. An adaptive "controller" for media presentations must filter information about learner performance through sets of rules relating the perceptual and cognitive demands of various sorts of visual and auditory stimuli to learning. Research on adaptive strategies that focuses on alternative media styles must therefore tackle the job of establishing these rules.

Sisk, J.E., Hewitt, M., and Metcalf, K.L. (1988). The effectiveness of AIDS education. *Health Affairs*, 7(5), 37-51.

"Results from numerous evaluations indicate that sexuality education programs increase factual knowledge about sexuality and sexually transmitted disease but, in general, have little measurable impact on attitudes or behaviors. There are some important exceptions. One program taught communication and problem-solving skills through role-playing and rehearsal...."

This article describes an analysis by the congressional Office of Technology Assessment to assess the effectiveness of AIDS education. In general, they found that few studies were methodologically sound. The above cited study was one of two studies found to actually influence the pregnancy rate of teens with no confounding factors.

Staff. (1988). Technology and the at-risk student. *Electronic Learning*, 35-49.

Technology can play an important role in reducing the number of at-risk students by providing an extremely effective learning environment for dropouts and potential dropouts. To understand how effective technology can be in this area, *Electronic Learning* convened a Technology Leadership Conference. The theme of this conference was Technology and the At-Risk Student. A panel of nine educators and national policy makers and one former dropout met to provide leadership for educators working with technology and at-risk populations. This article is a transcript of the panelists' comments with regard to: (1) defining the problem; (2) giving examples of where technology is working as an intervention tool (and what kinds of technologies are working); (3) suggesting what the technology industry can do to help address the problems of students at-risk; and (4) providing policy recommendations. Industry members representing hardware, software, videodisc, and other technology companies also participated in the dialogue.

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Appendix D

Existing Product Review

RISK BEHAVIOR PRODUCT REVIEW

Attached is a list of products currently available which explicitly focus on the prevention of risk behaviors, the development of decision making skills, or building self-esteem.

The primary risk behaviors on which we focused for this review were:

Use of psychoactive drugs, including alcohol and tobacco

Sexual activity, including sexually transmitted diseases and pregnancy.

A variety of approaches are taken in the products listed. Some attempt to prevent or modify behaviors solely through the presentation of information about potential damage and risk. Others present information only peripherally, and focus instead on making a strong emotional impact on the student. Still others attempt to build skills which may lessen the potential for involvement in risk behaviors. These skills include decision making and refusal skills. Others attempt to get even closer to the source of the problem by focusing primarily on the building of self-esteem and the improvement of self-concept. Many of the products use more than one approach; these are listed under **Emphasis/Approach**.

The products vary substantially in their scope of coverage. Some attempt to deal with only one discrete behavior such as smoking while others deal with clusters of behaviors within the context of a total health program or a simulation of a real world environment. The specific risk behaviors covered by a particular product are listed under **Behaviors Covered**. Where risk behaviors are treated within the context of a total health program, this is noted. In cases where the focus is on skills or self-esteem building, no specific risk behaviors are listed.

Included in the brief **Description** of the product is information on specific topics covered, how the program operates, and special or unusual features of the product.

This list is by no means all inclusive, but we believe that it is representative of the range of products available for both special and regular education students. Sources for the products listed included:

A search of the LINC Resources special education product database

The Educational Software Selector published by EPIE Institute

Software for Substance Abuse Education: A Critical Review of Products published by the Northwest Regional Education Laboratory

The catalogs of a number of producers of software and print materials. (This included a thorough review of the ETR Associates/Network Publications catalog. ETR/Network specializes in the distribution and publication of sexuality education and drug abuse prevention materials.)

Software reviews appearing in Electronic Learning and Classroom Computer Learning.

COMPUTER-BASED INSTRUCTION AND INTERACTIVE VIDEODISC

Title - **Alcohol and Pregnancy: Protecting the Unborn Child**
Publisher - Student Awareness Software
Format - Computer-based instruction
Hardware Requirements - Apple II line, MS DOS
Software Type - Tutorial
Audience - Normal adolescents
Age - Grades 9 - 12
Emphasis/Approach - Expanding information base
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - Yes
- Drugs - No
- Tobacco - No
- Sex - Yes
- Safety/Accidents - No

Description - Straightforward tutorial. Recordkeeping and customizable to provide information on local resources.

Title - **Alcohol, An Educational Simulation - The Party**
Publisher - Marshware Inc.
Format - Computer-based instruction
Hardware Requirements - Apple II line
Software Type - Tutorial and Simulation
Audience - Normal upper elementary and middle school students
Age - Grades 6 - 8
Emphasis/Approach - Prevention; Opportunities to practice decision making; Expanding information base
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - Yes
- Drugs - No
- Tobacco - No
- Sex - No
- Safety/Accidents - Yes

Description - Can be used by up to 6 students or 6 groups of students. Tutorial first, followed by decision making simulation of party where students make alcohol consumption and driving decisions. Finally, students play a video game which simulates the impaired functioning of someone who has consumed the amount of alcohol decided upon during the simulation.

Title - **Alcohol: 4 Interactive Programs** (Also called **Alcohol: Making the Choice** published by Focus Media)
Publisher - Student Awareness Software
Format - Computer-based instruction and print materials
Hardware Requirements - Apple II line, MS DOS
Software Type - Tutorial
Audience - Normal adolescents
Age - Grades 7 - 12
Emphasis/Approach - Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - Yes
    Drugs - No
    Tobacco - No
    Sex - No
    Safety/Accidents - Yes
Description - Tutorial interspersed with games and other activities. Teacher's notebook allows teachers to create worksheets, review student scores and add information about local resources. Covers the topics of the physiological, social, economic, and legal consequences of using alcohol.

Title - **Body Awareness Resource Network: Alcohol and Other Drugs Module**
Publisher - Learning Multi-Systems, Inc
Format - Computer-based instruction
Hardware Requirements - Apple II line
Software Type - Tutorial with some simulation and game components
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Opportunities to practice decision making; Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - Yes
    Alcohol - Yes
    Drugs - Yes
    Tobacco - Yes
    Sex - Yes
    Safety/Accidents - Yes
Description - A 7 segment program, consisting of multiple disks. Primarily informational, with an emphasis on decision making skills. Written in the first person so that it feels like the computer is interviewing the student. Simulation component is a party situation. Game is a driving under the influence video-style game. Administration program allows local user to disable certain content and to add some of their own information,

particularly names of available local resources. Also, students may enter messages, requests, etc. to the teacher.

Title - **Cocaine**
Publisher - Substance Abuse Educational Software
Format - Computer-based instruction
Hardware Requirements - Apple II line, MS DOS
Software Type - Tutorial with a simulation component
Audience - Normal adolescents
Age - Grades 6 - 12
Emphasis/Approach - Prevention; Opportunities to practice decision making; Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - No
    Drugs - Yes
    Tobacco - No
    Sex - No
    Safety/Accidents - No
Description - Principally a tutorial, but with a simulation component in which students make decisions about cocaine use. Glossary and option to write notes to teacher are available.

Title - **The Danger of Drugs**
Publisher - Queue
Format - Computer-based instruction
Hardware Requirements - Apple II line, MS DOS
Software Type - Tutorial
Audience - Unknown
Age - Unknown
Emphasis/Approach - Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - Yes
    Drugs - Yes
    Tobacco - Yes
    Sex - No
    Safety/Accidents - No
Description - Written at a 3rd or 4th grade reading level. No graphics. Straightforward tutorial with no branching. Very similar to "Drug Abuse," which has a higher reading level.

Title - **Drinking and Not Drinking: The Choice is Yours - Alcohol**
Publisher - Substance Abuse Educational Software
Format - Computer-based instruction
Hardware Requirements - Apple II line, MS DOS
Software Type - Tutorial
Audience - Normal Adolescents
Age - Grades 7 - 12
Emphasis/Approach - Expanding information base
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - Yes
- Drugs - No
- Tobacco - No
- Sex - No
- Safety/Accidents - No

Description - Straightforward tutorial provides information on which one might base decisions, but no opportunity to practice them. Feature which allows students to write confidential note to teacher available.

Title - **Drug Abuse**
Publisher - Intellectual Software (Queue)
Format - Computer-based instruction
Hardware Requirements - Apple II line, MS DOS, Macintosh
Software Type - Tutorial
Audience - Normal adolescents
Age - Grades 7 - 12
Emphasis/Approach - Expanding information base
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - Yes
- Drugs - Yes
- Tobacco - Yes
- Sex - No
- Safety/Accidents - No

Description - No graphics. Straightforward tutorial. 7th grade reading level. Very similar to "The Dangers of Drugs" by same producer. The main difference between them is reading level.

Title - **Drug Alert**
Publisher - Mindscape or Learning Well (Conflicting reports)
Format - Computer-based instruction and print materials
Hardware Requirements - Apple II line
Software Type - Simulation
Audience - Normal upper elementary and middle school students
Age - Grades 5 - 8

Emphasis/Approach - Opportunities to practice decision making;
Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - Yes
    Drugs - Yes
    Tobacco - Yes
    Sex - No
    Safety/Accidents - No
Description - Game format, in which students attempt to rescue a friend from drug dependency. In the process they learn about symptoms, medical implications, and street names of drugs. Recordkeeping included.

Title - **Drug Pursuit I & II**
Publisher - CompTech Systems Design
Format - Computer-based instruction
Hardware Requirements - Apple II line
Software Type - Game
Audience - Normal students in middle and high school
Age - 2 levels: Grades 6 - 8 and Grades 9 - 12
Emphasis/Approach - Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - Yes
    Drugs - Yes
    Tobacco - Yes
    Sex - No
    Safety/Accidents - No
Description - A computer variant of Trivial Pursuit using a bicycle race format. Student wins the game by answering questions in the categories of: uppers, downers, inside/out, tobacco/pot and potpourri. Complete teacher utility.

Title - **Drugs and Heartbeat: Experiments with a Daphnia**
Publisher - Cross Educational Software
Format - Computer-based instruction
Hardware Requirements - Apple II line
Software Type - Simulation
Audience - Normal adolescents
Age - Grades 7 - 12
Emphasis/Approach - Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - Yes
    Drugs - Yes

Tobacco - Yes
Sex - No
Safety/Accidents - No
Description - A science simulation, rather than a health behavior simulation. Students observe the effects of drugs on daphnia.

Title - **Drugs: Their Effects on You**
Publisher - Marshware Inc.
Format - Computer-based instruction
Hardware Requirements - Apple II line
Software Type - Tutorial
Audience - Normal middle school students
Age - Grades 6 - 8
Emphasis/Approach - Prevention; Focus on refusal skills; Expanding information base
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - Yes
Drugs - Yes
Tobacco - Yes
Sex - No
Safety/Accidents - No
Description - Presents the facts, emphasizing resisting peer pressure. Provides opportunity for students to enter their own data. For example, when a student enters his or her weight, the program figures out how many drinks it would take for that student to get drunk. No recordkeeping.

Title - **Drugs: Who's in Control**
Publisher - Marshware Inc.
Format - Computer-based instruction
Hardware Requirements - Apple II line
Software Type - Simulation
Audience - Normal middle school students
Age - Grades 6 - 8
Emphasis/Approach - Prevention; Opportunities to practice decision making; Focus on refusal skills
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - Yes
Drugs - Yes
Tobacco - Yes
Sex - No
Safety/Accidents - No
Description - Intended for group use in which some members of the group act as followers and others as friends

trying to prevent them from getting into trouble. Choices are based on the consensus of the group. Groups making safe choices are less likely to experience high-risk situations in the future; groups making unsafe choices more likely. No recordkeeping. This program is intended for use following "Drugs: Their Effect on You."

Title - **The Great Knowledge Race: Substance Abuse**
Publisher - Focus Media
Format - Computer-based instruction
Hardware Requirements - Apple II line
Software Type - Game
Audience - Normal upper elementary and middle school students
Age - Grades 4 - 8
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - No
  Alcohol - Yes
  Drugs - Yes
  Tobacco - Yes
  Sex - No
  Safety/Accidents - No
Description - A Trivial Pursuit format game. Students answer questions, but receive no feedback if answer is incorrect.

Title - **Health Hazards**
Publisher - MECC
Format - Computer-based instruction
Hardware Requirements - Apple II line
Software Type - Tutorial/Tool
Audience - Normal adolescents and young adults
Age - Grades 9 - College
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - Yes
  Alcohol - Yes
  Drugs - Yes
  Tobacco - Yes
  Sex - Unknown
  Safety/Accidents - No
Description - Introduces concept of how lifestyle affects health. Uses an awareness-building question format to measure an individual's current lifestyle against a projected risk of dying.

Title - **Health Risk Appraisal**
Publisher - HRM Software
Format - Computer-based instruction
Hardware Requirements - Apple II line
Software Type - Tutorial/Tool
Audience - Normal adolescents and young adults
Age - Grades 7 - College
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - Yes
- Alcohol - Yes
- Drugs - Yes
- Tobacco - Yes
- Sex - Unknown
- Safety/Accidents - Unknown

Description - A microcomputer-based health risk appraisal which identifies unhealthy behaviors and habits through a computer/user dialog and provides an overall appraisal with specific recommendations for improvement.

Title - **Healthy Decisions**
Publisher - American Cancer Society
Format - Computer-based instruction and print materials
Hardware Requirements - Apple II line
Software Type - Simulation
Audience - Normal upper elementary school students
Age - Grades 4 - 6
Emphasis/Approach - Prevention; Opportunities to practice decision making
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - Unknown
- Alcohol - Unknown
- Drugs - Unknown
- Tobacco - Yes
- Sex - No
- Safety/Accidents - Unknown

Description - Simulates health related decision making situations. Feedback emphasizes need to consider long-term consequences of the choice. Recordkeeping included. Provided free of charge by the American Cancer Society.

Title - **How I Can Stay Healthy**
Publisher - Center for Educational Experience, Development & Evaluation
Format - Computer-based instruction
Hardware Requirements - Apple II line

Software Type - Tutorial
Audience - Normal adolescents
Age - Grades 6 - 12
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - Yes
    Alcohol - Yes
    Drugs - Yes
    Tobacco - Yes
    Sex - No
    Safety/Accidents - No
Description - Provides information on alcohol and tobacco use as well as information on other general health topics such as nutrition and exercise.

Title - **Introduction to Psychoactive Drugs**
Publisher - Substance Abuse Educational Software
Format - Computer-based instruction
Hardware Requirements - Apple II line, MS DOS
Software Type - Tutorial
Audience - Normal high school and college students
Age - Grades 9 - College
Emphasis/Approach - Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - Yes
    Drugs - Yes
    Tobacco - Yes
    Sex - No
    Safety/Accidents - No
Description - Straightforward tutorial. Material presented at a fairly high technical level.

Title - **It's Wise to Say No to Drugs**
Publisher - Right On Programs
Format - Computer-based instruction and print materials
Hardware Requirements - Apple II line
Software Type - Unknown
Audience - Normal upper elementary school students
Age - Grades 4 - 6
Emphasis/Approach - Prevention; Focus on refusal skills
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - Unknown
    Drugs - Yes
    Tobacco - Unknown
    Sex - No

Safety/Accidents - No
Description - This software is intended for use in a teacher directed discussion/work session. Focus is on building the child's self-esteem and confidence.

Title - **Life - Pre/Post Test**
Publisher - Wellsource, Inc.
Format - Computer-based instruction
Hardware Requirements - MS DOS
Software Type - Assessment tool
Audience - Normal adolescents and young adults
Age - Grades 9 - College
Emphasis/Approach - Intervention; Expanding information base
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - Yes
  Alcohol - Yes
  Drugs - Yes
  Tobacco - Yes
  Sex - Unknown
  Safety/Accidents - Unknown
Description - Shows changes and trends originating from participation in LIFE, a health/fitness intervention program.

Title - **Micro-HRA**
Publisher - Planetree Medical Systems, Inc.
Format - Computer-based instruction
Hardware Requirements - MS DOS
Software Type - Simulation/Tool
Audience -
Age - Grades 10 - College
Emphasis/Approach - Intervention; Opportunities to practice decision making
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - Yes
  Alcohol - Yes
  Drugs - Yes
  Tobacco - Yes
  Sex - Yes
  Safety/Accidents - Unknown
Description - A microcomputer-based health risk appraisal which identifies unhealthy behaviors and habits.

Title - **Redlights,Greenlights**
Publisher - Interactive
Format - Computer-based instruction and print materials

Hardware Requirements - Apple II line
Software Type - Simulation
Audience - Normal upper elementary school students
Age - Grades 5-6 for current version (Grades 7-8 under development)
Emphasis/Approach - Opportunities to practice decision making
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - No
    Drugs - No
    Tobacco - No
    Sex - No
    Safety/Accidents - No
Description - Focus is on social problem solving. Goal is to allow students to practice making decisions so that they become more reflective and less impulsive.

Title - **Risko**
Publisher - Wellsource, Inc.
Format - Computer-based instruction
Hardware Requirements - MS DOS
Software Type - Tool
Audience - Normal adolescents and young adults
Age - Grades 9 - College
Emphasis/Approach - Intervention; Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - Yes
    Alcohol - Yes
    Drugs - Yes
    Tobacco - Yes
    Sex - Unknown
    Safety/Accidents - No
Description - Student input is used to develop a coronary risk profile to encourage life style changes.

Title - **Sexually Transmitted Diseases**
Publisher - HRM Software
Format - Computer-based instruction
Hardware Requirements - Apple II line
Software Type - Tutorial
Audience - Normal adolescents
Age - Grades 7 - College
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - No

Drugs - No
Tobacco - No
Sex - Yes
Safety/Accidents - No

Description - Gives students the facts on a variety of STD's, including AIDS. Pretest and posttest, but no record keeping.

Title - **Six Classes of Psychoactive Drugs**
Publisher - Substance Abuse Educational Software
Format - Computer-based instruction
Hardware Requirements - Apple II line, MS DOS
Software Type - Tutorial
Audience - Normal high school and college students
Age - Grades 9 - College
Emphasis/Approach - Expanding information base
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - No
Drugs - Yes
Tobacco - No
Sex - No
Safety/Accidents - No

Description - Straightforward tutorial. Material presented at a fairly high technical level.

Title - **Smart Choices**
Publisher - Tom Snyder Productions
Format - Computer-based instruction and print materials
Hardware Requirements - Apple II line, MS DOS
Software Type - Simulation
Audience - Normal upper elementary and middle school students
Age - Grades 5 - 9
Emphasis/Approach - Prevention; Opportunities to practice decision making; Focus on refusal skills; Expanding information base
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - Unknown
Drugs - Yes
Tobacco - Unknown
Sex - No
Safety/Accidents - No

Description - Focus is on goal setting, critical assessment, evaluation, and decision making in the context of real world problems.

Title - **Smoker's Profile**
Publisher - Wellsource, Inc.
Format - Computer-based instruction
Hardware Requirements - MS DOS
Software Type - Tool
Audience - Normal adolescents and young adults
Age - Grades 7 - College
Emphasis/Approach - Intervention; Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - No
    Drugs - No
    Tobacco - Yes
    Sex - No
    Safety/Accidents - No
Description - Designed to provide smokers with information about the serious consequences of their habit.

Title - **The Smoking Decision**
Publisher - Levy & McLaren
Format - Computer-based instruction
Hardware Requirements - Apple II line
Software Type - Simulation
Audience - Normal upper elementary and secondary students
Age - Grades 6 - 12
Emphasis/Approach - Prevention; Opportunities to practice decision making; Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - No
    Drugs - No
    Tobacco - Yes
    Sex - No
    Safety/Accidents - No
Description - Presents smoking related decision making situations. Encourages students to make their own decisions and resist peer pressure.

Title - **Smoking: It's Up To You**
Publisher - MECC
Format - Computer-based instruction and print materials
Hardware Requirements - Apple II line
Software Type - Tutorial
Audience - Normal adolescents
Age - Grades 7 - 12
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No

Total Health - No
Alcohol - No
Drugs - No
Tobacco - Yes
Sex - No
Safety/Accidents - No

Description - Presents information on health risks, cost, and immediate effects.

Title - **Target Interactive Project**
Publisher - Target, A Service organization of the National Federation of State High School Associations, dedicated to helping students deal with alcohol and other drugs.
Format - Interactive Videodisc
Hardware Requirements - IBM InfoWindow
Software Type - Simulation
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Opportunities to practice decision making; Focus on refusal skills
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - Yes
Drugs - Yes
Tobacco - Unknown
Sex - No
Safety/Accidents - Yes

Description - Somewhat customizable, i.e. teacher can plan a series of decisions for continuous play. Students usually select a character for whom they make decisions. However, they make choose to make all decisions on a particular topic (e.g. alcohol) for all characters. Aimed at those who are non-user or experimental user of drugs and alcohol.

Title - **TutorSystems: Alcohol and Health Program**
Publisher - BLS
Format - Computer-based instruction
Hardware Requirements - Apple II line
Software Type - Tutorial
Audience - Unknown
Age - Grades 7 - 12
Emphasis/Approach - Expanding information base
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - Yes
Drugs - No

Tobacco - No
Sex - No
Safety/Accidents - Yes
Description - Straightforward tutorial. No graphics.

Title - **A Week in the Life of...**
Publisher - Interactive
Format - Computer-based instruction
Hardware Requirements - MS DOS (IIGS version under development)
Software Type - Simulation
Audience - Normal teens
Age - Grades 7 - 12
Emphasis/Approach - Opportunities to practice decision making; Expanding information base
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - Yes
Alcohol - Yes
Drugs - Yes
Tobacco - Yes
Sex - Yes
Safety/Accidents - Yes
Description - Attempt to cover the above and many other non-risk behavior topics such as self-image, fitness, time management, and learning disabilities. Doesn't really focus on risk behaviors; seems to be trying to cover all of the personal concerns that adolescents typically have. Publisher claims particular success with at-risk students and a 5th grade reading level. Program is intended for use by small groups. Record-keeping system and printout of footprint of decision path option. Built-in database contains information for researching various topics.

Title - **What's Next**
Publisher - Interactive
Format - Level 2 Videodisc
Hardware Requirements - Pioneer 6000/6010 videodisc player only
Software Type - N/A
Audience - At-risk adolescents
Age - Unknown
Emphasis/Approach - Prevention; Strong emotional appeal
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - No
Drugs - No
Tobacco - No
Sex - No

Safety/Accidents - No
Description - Presents a realistic simulation of a high school student's decision about whether or not to drop out of school.

Title - **Why Do You Smoke?**
Publisher - HRM Software
Format - Computer-based instruction
Hardware Requirements - Apple II line
Software Type - Tool
Audience - Normal adolescents
Age - Grades 7 - 12
Emphasis/Approach - Intervention; Expanding information base
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - No
Drugs - No
Tobacco - Yes
Sex - No
Safety/Accidents - No
Description - An 18 item questionnaire which presents a "reason for smoking" profile for each individual.

Title - **AIDS Alert for Youth**
Publisher - Sunburst
Format - Filmstrip on videocassette
Audience - Normal upper elementary and middle school students
Age - Grades 5 - 9
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - No
    Drugs - Yes
    Tobacco - No
    Sex - Yes
    Safety/Accidents - No
Description - Provides current information about AIDS, advocating sexual abstinence and no use of IV drugs.

Title - **AIDS: The Reality in the Dream**
Publisher - Latin American Youth Center, Latinegro Theater, DC
Format - Videocassette
Audience - Normal adolescents and young adults (especially black and Latino)
Age - Grades 9 - 12
Emphasis/Approach - Intervention; Expanding information base; Strong emotional appeal
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - No
    Drugs - Yes
    Tobacco - No
    Sex - Yes
    Safety/Accidents - No
Description - Dramatic presentation about a young black woman as she learns of her HIV positive status. Targeted at IV drug users and their partners, this program provides information to help these individuals avoid becoming infected.

Title - **AIDS-Wise, No Lies**
Publisher - Current-Rutledge
Format - Videocassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Prevention; Expanding information base; Strong emotional appeal

Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - No
    Drugs - No
    Tobacco - No
    Sex - Yes
    Safety/Accidents - No
Description - 10 young people whose lives are affected by AIDS share their thoughts, feelings, and experiences. Intent is to break down typical adolescent feelings of invulnerability and encourage healthy behaviors. Essential AIDS facts not covered in the video itself but are in accompanying print materials.

Title - **Alcohol Facts: For Teenagers Only**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on videocassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Focus on refusal skills; Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - Yes
    Drugs - No
    Tobacco - No
    Sex - No
    Safety/Accidents - No
Description - Documents patterns of alcohol use. Debunks myths about alcohol. Shows ways to resist peer pressure.

Title - **All of Us and AIDS**
Publisher - Peer Education Health Resources
Format - Videocassette and teacher's guide
Audience - Normal adolescents
Age - Grades 7 - College
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - No
    Drugs - Yes
    Tobacco - No
    Sex - Yes
    Safety/Accidents - No
Description - While working on a video class project on AIDS, students confront tough questions about sexuality,

abstinence, homosexuality, and drug abuse. Encourages healthy behaviors. Essential AIDS facts not covered in the video itself are in accompanying print materials.

Title - **Anatomy and Attitudes: Understanding Sexuality**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on videocassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Expanding information base
Behaviors Covered -

- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - No
- Drugs - No
- Tobacco - No
- Sex - Yes
- Safety/Accidents - No

Description - Presents the facts about sexual development during the teen years in separate sections for males and females.

Title - **Bay City Kids**
Publisher - Unknown
Format - Videocassette
Hardware Requirements - N/A
Software Type - N/A
Audience - All young adolescents, including low achievers
Age - Unknown
Emphasis/Approach - Prevention; Strong emotional appeal
Behaviors Covered -

- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - Unknown
- Drugs - Unknown
- Tobacco - Unknown
- Sex - Yes
- Safety/Accidents - No

Description - Soap opera format which presents events and characters that young teens can identify with.

Title - **Be Your Best Self: Assertiveness Training**
Publisher - Sunburst
Format - Videocassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Prevention; Focus on refusal skills
Behaviors Covered -

Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - No
Drugs - No
Tobacco - No
Sex - No
Safety/Accidents - No

Description - Does not deal with risk behavior as such. Rather it show students when and how to be assertive.

Title - **The Birth Control Movie**
Publisher - Perennial Education
Format - Videocassette
Audience - Normal adolescents
Age - Grades 9 - 12
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - No
Drugs - No
Tobacco - No
Sex - Yes
Safety/Accidents - No

Description - While working on a video class project, students confront issues related to sexuality and birth control. Targeted especially at students who have postponed sexual intercourse.

Title - **Choosing to Wait: Sex and Teenagers**
Publisher - Sunburst
Format - Videocassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Strong emotional appeal
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - No
Drugs - No
Tobacco - No
Sex - Yes
Safety/Accidents - No

Description - Presents 3 stories about teenagers' sexual decisions, including the decision by a sexually active couple to abstain in the future.

Title - **Circles I; Circles II; Circles III**
Publisher - James Stanfield & Company
Format - Slides, Filmstrip, or Videocassette, teacher's guide and other print materials
Audience - Secondary special education students and developmentally disabled adults
Age - Grades 7 - Adult
Emphasis/Approach - Prevention; Focus on refusal skills; Expanding information base
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - No
- Drugs - No
- Tobacco - No
- Sex - Yes
- Safety/Accidents - No

Description - These three programs cover various topics in the area of sex education including: appropriate social behaviors, relationship building, sexual abuse, and STD's. They provide information and modelling of appropriate behaviors.

Title - **Cocaine: The Emerging Facts**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on videocassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Expanding information base
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - No
- Drugs - Yes
- Tobacco - No
- Sex - No
- Safety/Accidents - No

Description - Provides information on cocaine and the story of one teenage addict, showing the negative impact of cocaine addiction on her life.

Title - **Cocaine and the Student Athlete**
Publisher - Sunburst
Format - Videocassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Focus on refusal skills; Expanding information base; Strong emotional appeal
Behaviors Covered -

Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - No
Drugs - Yes
Tobacco - No
Sex - No
Safety/Accidents - No

Description - Provides information on cocaine and the story of one teenage athlete addict, showing the negative impact of cocaine addiction on his life.

Title - **Crack!**
Publisher - Sunburst
Format - Videocassette and Filmstrip
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Expanding information base; Strong emotional appeal
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - No
Drugs - Yes
Tobacco - No
Sex - No
Safety/Accidents - No

Description - Shows dangers of crack and presents interviews with former teenage addicts.

Title - **Dangerous Dieting**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on cassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Expanding information base
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - No
Drugs - No
Tobacco - No
Sex - No
Safety/Accidents - No
Other - Eating Disorders

Description - Examines our society's obsession with thinness, available diets, and symptoms, consequences, and causes of eating disorders. Presents healthy strategies for maintaining a desirable weight.

Title - **Decisions -- Teens, Sex and Pregnancy**
Publisher - United Learning
Format - Videocassette and facilitator's guide
Audience - Normal adolescents
Age - Grades 7 - 12
Emphasis/Approach - Prevention; Expanding information base; Strong emotional appeal
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - No
- Drugs - No
- Tobacco - No
- Sex - Yes
- Safety/Accidents - No

Description - A look at the lives of 3 girls who have had to deal with the problems facing the pregnant teenager.

Title - **Did Jenny Have to Die?**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on videocassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Prevention; Expanding information base; Strong emotional appeal
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - No
- Drugs - No
- Tobacco - No
- Sex - No
- Safety/Accidents - No
- Other - Suicide

Description - Alerts students to the causes and warning signs of teen suicide through a dramatization of one teenager's suicide.

Title - **Drinking and Driving: What Teens Should Know**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on cassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Focus on refusal skills; Expanding information base
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - Yes

Drugs - No
Tobacco - No
Sex - No
Safety/Accidents - Yes

Description - Delivers the facts about alcohol and its effect on driving, and shows ways to deal with peer pressure.

Title - **Drugs: Values and Decisions**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on cassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Focus on refusal skills; Expanding information base
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - Yes
- Drugs - Yes
- Tobacco - Yes
- Sex - No
- Safety/Accidents - No

Description - Explores the reasons that young people turn to drugs and ways to resist these drugs

Title - **Drugs, Your Friends, and You**
Publisher - Sunburst
Format - Videocassette and Filmstrip
Audience - Normal upper elementary and middle school students
Age - Grades 5 - 9
Emphasis/Approach - Prevention; Focus on refusal skills
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - Yes
- Drugs - Yes
- Tobacco - No
- Sex - No
- Safety/Accidents - No

Description - Teaches refusal skills as they relate to drug and alcohol use.

Title - **Everyone Can Avoid AIDS**
Publisher - Milestone Productions
Format - Videocassette
Audience - Normal middle school and high school students
Age - Grades 6 - 12
Emphasis/Approach - Prevention; Expanding information base

Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - No
- Drugs - No
- Tobacco - No
- Sex - Yes
- Safety/Accidents - No

Description - Information on AIDS and its prevention is presented by clay animation characters.

Title - **Four Pregnant Teenagers: Four Different Decisions**
Publisher - Sunburst
Format - Videocassette and Filmstrip
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Expanding information base; Strong emotional appeal
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - No
- Drugs - No
- Tobacco - No
- Sex - Yes
- Safety/Accidents - No

Description - Presents the options available through the stories of 4 pregnant teenagers.

Title - **The Gentle Art of Saying No**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on videocassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Prevention; Focus on refusal skills
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - No
- Drugs - No
- Tobacco - No
- Sex - No
- Safety/Accidents - No

Description - Does not deal with risk behavior as such. Rather it addresses refusal skills for coping with pressure from peers and others.

Title - **The Group and You: Handling the Pressures**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on videocassette
Audience - Normal upper elementary and middle school students
Age - Grades 5 - 9
Emphasis/Approach - Prevention; Focus on refusal skills
Behaviors Covered -
    Risk Behavior (Unspecified) - Yes
    Total Health - No
    Alcohol - No
    Drugs - No
    Tobacco - No
    Sex - No
    Safety/Accidents - No
Description - Presents information on how groups work to exert pressure on their members. Dramatizes 3 situations in which peer pressure creates problems.

Title - **His Baby Too: Problems of Teenage Pregnancy**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on videocassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Expanding information base; Strong emotional appeal
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - No
    Drugs - No
    Tobacco - No
    Sex - Yes
    Safety/Accidents - No
Description - Presents the story of one teen pregnancy and information about available options in teenage pregnancy situations. Pays particular attention to the needs of the teenage father.

Title - **How Can I Tell if I'm Hooked?**
Publisher - Sunburst
Format - Videocassette or Filmstrip
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Focus on refusal skills; Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - Yes

Drugs - Yes
Tobacco - Yes
Sex - No
Safety/Accidents - Yes
Description - Dramatization of 2 teenage addicts. Discusses factors likely to lead to addiction, patterns of addiction, and the role of peer pressure.

Title - **How to Make Good Decisions**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on videocassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Emphasis on decision making skills
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - No
Drugs - No
Tobacco - No
Sex - No
Safety/Accidents - No
Description - Identifies the teen years as a time of intensive decision making and presents a step-by-step guide to use in making decisions.

Title - **The Inside Story with Slim Goodbody**
Publisher - Agency for Instructional Technology
Format - Videocassette
Audience - Normal upper elementary school students
Age - Grades 3 - 5
Emphasis/Approach - Prevention; Emphasis on decision making skills; Focus on refusal skills; Expanding information base
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - Unknown
Drugs - Yes
Tobacco - Unknown
Sex - Yes
Safety/Accidents - No
Description - This is number 10 in a series. Emphasizes the need to make wise and healthy choices when faced with the temptation to use drugs.

Title - **It Only Takes Once**
Publisher - Intermedia
Format - Videocassette
Audience - Normal adolescents
Age - Grades 7 - 12
Emphasis/Approach - Prevention; Focus on refusal skills; Expanding information base; Strong emotional appeal
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - No
  Alcohol - No
  Drugs - No
  Tobacco - No
  Sex - Yes
  Safety/Accidents - No
Description - Informs teens about responsible sexual choices from saying no to effective contraception.

Title - **Learning to Say No**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on videocassette
Audience - Normal upper elementary and middle school students
Age - Grades 5 - 9
Emphasis/Approach - Prevention; Focus on refusal skills
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - No
  Alcohol - No
  Drugs - No
  Tobacco - No
  Sex - No
  Safety/Accidents - No
Description - Does not deal with any of the identified risk behaviors. Deals with refusal skills in situations typically encountered by young teens.

Title - **Life Facts 1; Life Facts 2; Life Facts 3**
Publisher - James Stanfield & Company
Format - Slides, teacher's manual, posters, and other print materials.
Audience - Secondary special education students and developmentally disabled adults.
Age - Grades 7 - Adult

Emphasis/Approach - Prevention; Focus on refusal skills; Expanding information base
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - Yes
- Drugs - Yes
- Tobacco - Yes
- Sex - Yes
- Safety/Accidents - Yes

Description - This series provides instruction in a number of topics related to independent living skills including: biological aspects of sexuality, appropriate sexual behavior, relationship building, sexual abuse, personal safety, and substance abuse prevention.

Title - **Life Positive: A Drug Abuse Prevention Curriculum**
Publisher - Sunburst
Format - Videocassette and print materials
Audience - Normal upper elementary and middle school students
Age - Grades 5 - 9
Emphasis/Approach - Prevention; Focus on refusal skills; Strong emotional appeal
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - Yes
- Drugs - Yes
- Tobacco - Unknown
- Sex - No
- Safety/Accidents - No

Description - This curriculum aims at preventing drug use by strengthening students' self-esteem and enhancing coping skills.

Title - **Liking Me: Building Self-Esteem**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on videocassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Prevention
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - No
- Drugs - No
- Tobacco - No
- Sex - No
- Safety/Accidents - No

Description - Explains what self-esteem is and how to take steps to build it.

Title - **Making Decisions: You Can Learn How**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on videocassette
Audience - Normal upper elementary and middle school students
Age - Grades 5 - 9
Emphasis/Approach - Emphasis on decision making skills
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - No
    Drugs - No
    Tobacco - No
    Sex - No
    Safety/Accidents - No
Description - Presents 5 basic steps for decision making, but does not target any specific risk behaviors.

Title - **Marijuana and Your Mind**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on videocassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - No
    Drugs - Yes
    Tobacco - No
    Sex - No
    Safety/Accidents - No
Description - Presents the facts, particularly marijuana's effects on health. Suggests more constructive ways to deal with personal problems.

Title - **Me Power: Building Self-Confidence**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on videocassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Focus on building self-esteem/refusal skills
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - No
    Drugs - No
    Tobacco - No
    Sex - No
    Safety/Accidents - No

Description - Explains what self concept is and how to take steps to build self-esteem.

Title - **Meet a Teenage Drug Addict**
Publisher - Sunburst
Format - Videocassette or Filmstrip
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Strong emotional appeal
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - Yes
    Drugs - Yes
    Tobacco - Unknown
    Sex - No
    Safety/Accidents - No
Description - Life story of a teenage former addict told from first the person.

Title - **Natural Highs and How to Get Them**
Publisher - Sunburst
Format - Filmstrips on videocassette and filmstrips
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Prevention; Developing coping skills
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - Yes
    Drugs - Yes
    Tobacco - Unknown
    Sex - No
    Safety/Accidents - No
Description - Teaches students ways to achieve natural highs through physical activity and mental concentration.

Title - **OK to Say No: The Case for Waiting**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on videocassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Strong emotional appeal
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - No
    Drugs - No

Tobacco - No
Sex - Yes
Safety/Accidents - No
Description - Presents the stories of 3 teenagers who have made different decisions about sexual activity.

Title - **The Power of Choice**
Publisher - Elkind and Sweet
Format - Videocassette (Series of 12)
Audience - Normal adolescents
Age - Grades 9 - 12
Emphasis/Approach - Expanding information base; Focus on building self-esteem/refusal skills
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - Yes
Alcohol - Yes
Drugs - Yes
Tobacco - Yes
Sex - Yes
Safety/Accidents - Yes
Description - Presents filmed discussions between a comedian and groups of high school students as they discuss a number of issues including: values; self-esteem; coping with pressure; drugs and alcohol including driving while intoxicated; sex and STD's; depression and suicide; and communication with parents.

Title - **Real People: Meet a Teenage Mother**
Publisher - Sunburst
Format - Videocassette and Filmstrip
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Prevention; Strong emotional appeal
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - No
Drugs - No
Tobacco - No
Sex - Yes
Safety/Accidents - No
Description - A real teenage mother relates her experiences and problems.

Title - **Self-Concept: How I Know Who I Am**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on videocassette

Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Focus on building self-esteem/refusal skills
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - No
- Drugs - No
- Tobacco - No
- Sex - No
- Safety/Accidents - No

Description - Explains what self-concept is and how to take steps to build self-concept.

Title - **Sexually Transmitted Diseases: What You Should Know**
Publisher - Sunburst
Format - Videocassette and Filmstrip
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Expanding information base
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - No
- Drugs - No
- Tobacco - No
- Sex - Yes
- Safety/Accidents - No

Description - Presents current information on chlamydia and other STD's (including AIDS), emphasizing consequences if left untreated. Stresses abstinence as best way to avoid STD's.

Title - **Smoking: A Research Update**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on videocassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Expanding information base
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - No
- Drugs - No
- Tobacco - Yes
- Sex - No
- Safety/Accidents - No

Description - Provides definitive answers to questions students raise about smoking.

Title - **Smokeless Tobacco: The Whole Truth**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on cassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Expanding information base
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - No
Drugs - No
Tobacco - Yes
Sex - No
Safety/Accidents - No
Description - Provides the facts and presents an alternative role model, a former baseball great.

Title - **Some Girls**
Publisher - Fanlight Productions
Format - Videocassette
Audience - Normal adolescents
Age - Grades 7 - 12
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - No
Drugs - No
Tobacco - No
Sex - Yes
Safety/Accidents - No
Description - Profiles 4 teenage girls and addresses the topics of sexuality, pregnancy, parenting, and pregnancy prevention.

Title - **Steroids: Shortcut to Make-Believe Muscles**
Publisher - Sunburst
Format - Videocassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - No
Drugs - Yes
Tobacco - No
Sex - No
Safety/Accidents - No

Description - Describes damaging effects of steroids and shows students how to do body building without drugs.

Title - **Strong Kids, Safe Kids**
Publisher - Paramount Home Video
Format - Videocassette
Audience - Normal elementary and middle school students
Age - Grades K-8
Emphasis/Approach - Prevention; Focus on refusal skills; Expanding information base
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - No
  Alcohol - No
  Drugs - No
  Tobacco - No
  Sex - Yes
  Safety/Accidents - No
Description - Uses lessons, songs and animated characters to discuss child sexual abuse and teach prevention skills.

Title - **Suicide at 17**
Publisher - Lawren Productions, Inc.
Format - Videocassette
Audience - Secondary special education students
Age - Grades 7 - 12
Emphasis/Approach - Prevention; Strong emotional appeal
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - No
  Alcohol - Unknown
  Drugs - Yes
  Tobacco - Unknown
  Sex - No
  Safety/Accidents - No
  Other - Suicide
Description - Instructional film focusing on drug education and suicide.

Title - **Teenage Birth Control: Why Doesn't It Work**
Publisher - Sunburst
Format - Videocassette and Filmstrip
Audience - Normal adolescents
Age - Unknown

Emphasis/Approach - Expanding information base
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - No
Drugs - No
Tobacco - No
Sex - Yes
Safety/Accidents - No
Description - Arms students with the facts they need to make sexual decisions. Provides information on birth control in a section at the end which may be shown at the teacher's discretion.

Title - **Teenage Sex: How to Say No**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on videocassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Emphasis on decision making skills; Focus on refusal skills
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - No
Drugs - No
Tobacco - No
Sex - Yes
Safety/Accidents - No
Description - Adapts principles of assertiveness training to sexual situations. Outlines step by step procedure to help teens make decisions.

Title - **Turning Off: Drugs and Peer Pressure**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on videocassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Prevention; Focus on refusal skills
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - Unknown
Drugs - Yes
Tobacco - Unknown
Sex - No
Safety/Accidents - No
Description - Emphasis is on understanding and resisting peer pressure. Presents a minicourse in assertiveness training.

Title - **Understanding AIDS: What Teens Need to Know**
Publisher - Sunburst
Format - Videocassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - Yes
Drugs - Yes
Tobacco - No
Sex - Yes
Safety/Accidents - No
Description - Presents current information on AIDS and its prevention.

Title - **Understanding Human Reproduction**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on videocassette
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Expanding information base
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - No
Drugs - No
Tobacco - No
Sex - Yes
Safety/Accidents - No
Description - Presents the basics of human reproduction.

Title - **Understanding Suicide**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on videocassette
Audience - Normal upper elementary and middle school students
Age - Grades 5 - 9
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - No
Drugs - No
Tobacco - No
Sex - No
Safety/Accidents - No
Other - Suicide

Description - Alerts viewers to the signs of an impending suicide attempt. Shows students exactly what steps to take.

Title - **Values and Choices**
Publisher - Network Publications
Format - Videocassette, teacher's manual and other print materials
Audience - Normal middle school students
Age - Grades 7 - 8
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - No
- Drugs - No
- Tobacco - No
- Sex - Yes
- Safety/Accidents - No

Description - Presents sexual abstinence as the best choice for young adolescents and justifies it in terms of explicitly stated values -- equality, self-control, respect, responsibility, honesty, promise-keeping, and fairness.

Title - **Who Am I? Looking at Self-Concept**
Publisher - Sunburst
Format - Filmstrip and Filmstrip on videocassette
Audience - Normal upper elementary and middle school students
Age - Grades 5 - 9
Emphasis/Approach - Focus on building self-esteem
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - No
- Drugs - No
- Tobacco - No
- Sex - No
- Safety/Accidents - No

Description - Explains what self-concept is and how to take steps to improve it.

PRINT MATERIALS ONLY

Title - **AIDS Questions and Answers For Kids; AIDS Questions and Answers for Teens**
Publisher - The Learning Works
Format - Interactive Books
Audience - Normal upper elementary and secondary school students
Age - Grades 5 - 12
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - No
    Drugs - No
    Tobacco - No
    Sex - Yes
    Safety/Accidents - No
Description - Activity books using a question and answer format to help students become sensitive to the seriousness of AIDS.

Title - **AIDS: Think About It**
Publisher - Network Publications
Format - Trifold pamphlet
Audience - Normal adolescents
Age - Grades 7 - 12
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - No
    Drugs - No
    Tobacco - No
    Sex - Yes
    Safety/Accidents - No
Description - Pamphlet provides adolescents with basic information they need to avoid AIDS. Low reading level. Available in Spanish and English.

Title - **Deciding About Sex: The Choice to Abstain**
Publisher - Network Publications
Format - Trifold pamphlet
Audience - Normal adolescents
Age - Grades 9 - 12
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - No

Drugs - No
Tobacco - No
Sex - Yes
Safety/Accidents - No
Description - Pamphlet provides adolescents with basic information on the physical, emotional and moral aspects of abstinence. Available in Spanish and English.

Title - **Breaking the Chain: A Sexually Transmitted Disease Teaching Guide**
Publisher - Planned Parenthood of St. Louis
Format - Curriculum guide
Audience - Normal adolescents
Age - Grades 7 - 12
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - No
Drugs - No
Tobacco - No
Sex - Yes
Safety/Accidents - No
Description - This guide provides information on STD's, lesson plans, and masters.

Title - **The Changer and the Changed**
Publisher - Management Sciences for Health/Network Publications
Format - Student books and teacher' guides
Audience - Normal adolescents
Age - Grades 7 - 12
Emphasis/Approach - Intervention; Emphasis on decision making skills
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - No
Drugs - No
Tobacco - No
Sex - No
Safety/Accidents - No
Description - This book provides the structure teens and young adults need to achieve self-directed behavior change. It presents 7 steps: defining problem behavior; setting a goal; collecting information; designing an action plan; building support; evaluating/revising; and maintaining behavior.

Title - **Choosing Good Health**
Publisher - Steck-Vaughn
Format - Teacher's guide and student workbooks
Audience - Upper elementary and middle school special education students
Age - Grades 5 - 8
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - Yes
  Alcohol - Yes
  Drugs - Yes
  Tobacco - Yes
  Sex - No
  Safety/Accidents - Yes
Description - Materials to teach health and safety with an emphasis on mental health, nutrition, first aid, safety, social health, and substance abuse.

Title - **Coping with AIDS: Facts and Fears**
Publisher - Rosen Publishing Group
Format - Paperback book
Audience - Normal adolescents
Age - Grades 7 - 12
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - No
  Alcohol - No
  Drugs - No
  Tobacco - No
  Sex - Yes
  Safety/Accidents - No
Description - This book speaks frankly to teenagers and provides them with up-to-date information about AIDS and its avoidance.

Title - **An Easy Guide to Loving Carefully**
Publisher - Planned Parenthood of Contra Costa, CA
Format - Paperback book
Audience - Secondary special education students and developmentally disabled young adults
Age - Grades 9 - Adult
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - No
  Alcohol - No
  Drugs - No
  Tobacco - No

Sex - Yes
Safety/Accidents - No
Description - This book presents basic information on sexuality, abstinence, birth control, pregnancy, and STD's. Low reading level and large type. Glossary includes slang terms to facilitate understanding.

Title - **Educator's Guide to AIDS and Other STD's**
Publisher - Stephen R. Stroka, Inc.
Format - Curriculum guide
Audience - Normal adolescents
Age - Grades 7 - 12
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - No
Drugs - No
Tobacco - No
Sex - Yes
Safety/Accidents - No
Description - This book provides information on STD's, lesson plans, masters, and pre/post student questionnaires.

Title - **Enhance Self-Concept in the Classroom: A Handbook for Teachers and Parents**
Publisher - Prentice-Hall
Format - Curriculum guide
Audience - Normal elementary and secondary students
Age - Grades K - 12
Emphasis/Approach - Prevention; Focus on building self-esteem
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - No
Drugs - No
Tobacco - No
Sex - Yes
Safety/Accidents - No
Description - Ideas for exercises to improve self-image.

Title - **Entering Adulthood**
Publisher - Network Publications
Format - Teacher's guides and student workbooks
Audience - Normal adolescents
Age - Grades 9 - 12

Emphasis/Approach - Prevention; Emphasis on decision making skills; Focus on building self-esteem; Expanding information base
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - No
  Alcohol - Yes
  Drugs - Yes
  Tobacco - Yes
  Sex - Yes
  Safety/Accidents - No
  Other - Suicide
Description - This is a series which covers health and personal development topics important to adolescents and young adults such as: self-esteem, reproduction and contraception, relationships, STD's, suicide, and drugs.

Title - **Everything You Need to Know About ... (Series)**
Publisher - The Rosen Publishing Group, NY
Format - Instruction module texts
Audience - Secondary special education students
Age - Grades 7 - 12
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - No
  Alcohol - Yes
  Drugs - Yes
  Tobacco - Yes
  Sex - Yes
  Safety/Accidents - No
Description - This series of books provides information on a wide variety of health topics including: suicide; date rape, sexual abuse, and pregnancy; drug and alcohol abuse; STD's; and family relationships. 4th - 6th grade reading level.

Title - ... **Facts** (For example, STD Facts)
Publisher - Network Publications
Format - Trifold handout pamphlets
Audience - Normal adolescents
Age - Grades 7 - 12
Emphasis/Approach - Expanding information base
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - No
  Alcohol - Unknown
  Drugs - Yes
  Tobacco - Unknown

- Sex - Yes
- Safety/Accidents - No

Description - This series of pamphlets provides information on a variety of topics including STD's, sexual maturation, pregnancy and birth control, and drugs.

Title - **Into Adolescence**
Publisher - Network Publications
Format - Teacher's guides and student workbooks
Audience - Normal upper elementary and middle school students
Age - Grades 5 - 8
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -

- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - Yes
- Drugs - Yes
- Tobacco - Yes
- Sex - Yes
- Safety/Accidents - No

Description - This is a series which covers health and personal development topics important to young adolescents such as: sexual abstinence, sexual maturation, family living, self-esteem, communication, avoiding drugs, and AIDS.

Title - **It's Your Choice**
Publisher - Network Publications
Format - Interactive story books, facts books and teacher's guides (a set of each for the 3 topics covered)
Audience - Normal upper elementary and middle school students
Age - Grades 5 - 8
Emphasis/Approach - Prevention; Opportunities to practice decision making; Focus on refusal skills; Expanding information base
Behaviors Covered -

- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - Yes
- Drugs - Yes
- Tobacco - Yes
- Sex - No
- Safety/Accidents - No

Description - This series of books treats the topics of alcohol, tobacco and marijuana use. Fact books allow students to get the information they need and present case studies that model ways to say no. Interactive fiction books allow students to make decisions and explore their consequences.

Suggested lessons include providing opportunities for students to practice saying no and expressing reasons for saying no.

Title - **Know About AIDS**
Publisher - Walker and Company
Format - Paperback book
Audience - Normal upper elementary school students
Age - Grades 4 - 6
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - No
    Drugs - No
    Tobacco - No
    Sex - Yes
    Safety/Accidents - No
Description - This book explains AIDS to elementary school students.

Title - **Latino Family Life Education Series**
Publisher - Network Publications
Format - Curriculum guide and other print materials
Audience - Normal upper elementary and middle school students (Spanish-speaking)
Age - Grades 5 - 8
Emphasis/Approach - Prevention; Expanding information base; Focus on building self-esteem
Behaviors Covered -
    Risk Behavior (Unspecified) - Yes
    Total Health - No
    Alcohol - No
    Drugs - No
    Tobacco - No
    Sex - No
    Safety/Accidents - No
Description - This series of 3 curriculum guides is designed to help teachers build positive self-concept among Latino youths, and develop communication and other skills which lay the groundwork for preventing high-risk behaviors.

Title - **Lifeschool Worktexts**
Publisher - Wieser Educational, Inc.
Format - Student workbooks
Audience - Secondary special education students and developmentally disabled adults
Age - Grades 7 - Adult

Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - Yes
  Alcohol - Yes
  Drugs - Yes
  Tobacco - Yes
  Sex - No
  Safety/Accidents - Yes
Description - Designed to teach independent living skills. Covers topics such as: first aid, home safety, health, and substance abuse.

Title - **Linda Mandaras Talks to Teens About AIDS**
Publisher - Newmarket Press
Format - Paperback book
Audience - Normal adolescents
Age - Grades 9 - 12
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - No
  Alcohol - No
  Drugs - No
  Tobacco - No
  Sex - Yes
  Safety/Accidents - No
Description - This book speaks frankly to teenagers and provides them with up-to-date information about AIDS and its avoidance.

Title - **Making Smart Choices About Drugs**
Publisher - Janus Books
Format - Teacher's guide and student workbooks
Audience - Upper elementary and secondary special education students
Age - Grades 5 - 12
Emphasis/Approach - Prevention; Opportunities to practice decision making; Focus on refusal skills
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - No
  Alcohol - Unknown
  Drugs - Yes
  Tobacco - Unknown
  Sex - No
  Safety/Accidents - No
Description - Provides strategies for staying drug free and opportunities to practice making responsible

choices through role-playing, discussions, and writing activities. 4th grade reading level.

Title - **NEX: The New Experiences Magazine**
Publisher - Printed Matter, Inc.
Format - Magazine (May be a one time publication which happens to be in magazine format.)
Audience - Normal middle school students
Age - Grades 5 - 12
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - Yes
- Alcohol - Yes
- Drugs - Yes
- Tobacco - Yes
- Sex - Yes
- Safety/Accidents - Unknown

Description - Presents adolescence as a time when many difficult decisions must be made in the areas of sexuality and health. Provides information and suggestions for handling issues such as substance abuse, stress and depression, STD's, eating disorders, and sexual activity.

Title - **Photonovels**
Publisher - California AIDS Clearinghouse/Network Publications
Format - Spanish photonovels (comic books using photographs)
Audience - Normal adolescents and young adults (Spanish-speaking)
Age - Grades 7 - Adult
Emphasis/Approach - Expanding information base
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - No
- Drugs - Yes
- Tobacco - No
- Sex - Yes
- Safety/Accidents - No

Description - This series of photonovels presents information on AIDS risk and prevention techniques in the areas of sexual behaviors and IV drug use. These are targeted especially at Spanish speaking youth.

Title - **Positive Images: A New Approach to Contraceptive Education**
Publisher - Planned Parenthood of Bergen County, NJ
Format - Teacher's guide and student worksheets
Audience - Normal adolescents

Age - Grades 7 - 12
Emphasis/Approach - Prevention; Emphasis on decision making skills; Focus on refusal skills; Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - No
    Drugs - No
    Tobacco - No
    Sex - Yes
    Safety/Accidents - No
Description - Provides information about the pros and cons of various birth control methods and activities in which to develop necessary subskills for effective decision making.

Title - **Project Self-Esteem**
Publisher - Network Publications
Format - Curriculum guide
Audience - Normal elementary school students
Age - Grades 2 - 6
Emphasis/Approach - Prevention; Focus on building self-esteem
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - No
    Drugs - No
    Tobacco - No
    Sex - No
    Safety/Accidents - No
Description - Lessons for building self-esteem include topics of: Realizing Your Uniqueness, Stress Reduction, and Goal Setting.

Title - **Preventing Alcohol Abuse**
Publisher - Alcohol Information from Miller [Brewing Company]
Format - Curriculum guide
Audience - Normal upper elementary and secondary school students
Age - Grades 5 - 12
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - Yes
    Drugs - No
    Tobacco - No
    Sex - No
    Safety/Accidents - Unknown

Description - Developed by Miller to provide factual, non-judgmental information about alcohol, and its use and abuse.

Title - **Preventing Drug Abuse: An Activity Pack**
Publisher - J. Weston Walch
Format - Multimedia - Audio cassette, masters, teacher guide.
Audience - Upper elementary and middle school special education students
Age - Grades 5-9
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - No
  Alcohol - Yes
  Drugs - Yes
  Tobacco - Yes
  Sex - No
  Safety/Accidents - No
Description - Intended for use as an independent activity.

Title - **Preventing Fetal Alcohol Syndrome and Other Related Birth Defects**
Publisher - Association for Retarded Citizens
Format - Teacher's manual, student workbooks, masters
Audience - Normal adolescents
Age - Grades 7 - 12
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - No
  Alcohol - Yes
  Drugs - No
  Tobacco - No
  Sex - Yes
  Safety/Accidents - No
Description - Purpose of this material, developed by ARC, is to make young people more aware of the consequences of alcohol to their unborn children.

Title - **Preventing Sexual Abuse of Persons with Disabilities**
Publisher - Network Publications
Format - Curriculum guide
Audience - Secondary special education students
Age - Grades 7 - 12
Emphasis/Approach - Prevention; Focus on refusal skills; Expanding information base
Behaviors Covered -
  Risk Behavior (Unspecified) - No

- Total Health - No
- Alcohol - No
- Drugs - No
- Tobacco - No
- Sex - Yes
- Safety/Accidents - No

Description - Lessons for a sexual abuse prevention program by disability type.

Title - **Reducing the Risk: Building Skills to Prevent Pregnancy**
Publisher - Network Publications
Format - Teacher's guides and student workbooks
Audience - Normal adolescents
Age - Grades 9 - 12
Emphasis/Approach - Prevention; Focus on refusal skills; Expanding information base
Behaviors Covered -

- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - No
- Drugs - No
- Tobacco - No
- Sex - Yes
- Safety/Accidents - No

Description - This program provides information, cognitive and behavioral skills training and opportunity to practice new skills.

Title - **Self Discovery Series**
Publisher - Management Sciences for Health/Network Publications
Format - Student books and teacher' guides (Series of 3)
Audience - Normal adolescents
Age - Grades 7 - 12
Emphasis/Approach - Prevention; Emphasis on decision making skills; Focus on refusal skills; Expanding information base
Behaviors Covered -

- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - Yes
- Drugs - Yes
- Tobacco - Yes
- Sex - Yes
- Safety/Accidents - Unknown

Description - Three books cover the topics of: Alcohol and Other Drugs; Caring, Loving and Sexuality; and Discovering Skills. These skills are increasing self acceptance, achieving personal goals, managing stress and strong emotions, improve eating and exercise habits, building healthy relationships, resisting peer and advertising pressures, and strengthening decision making.

Title - **Sex, Drugs and AIDS**
Publisher - Bantam Books
Format - Paperback book
Audience - Normal adolescents
Age - Grades 9 - 12
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - No
  Alcohol - No
  Drugs - No
  Tobacco - No
  Sex - Yes
  Safety/Accidents - No
Description - This book speaks frankly to teenagers about the facts and fallacies of AIDS.

Title - **Sexual Decision making Series for Teens**
Publisher - Network Publications
Format - Interactive Books
Audience - Normal adolescents
Age - Grades 9 - 12
Emphasis/Approach - Prevention; Opportunities to practice decision making; Expanding information base
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - No
  Alcohol - No
  Drugs - No
  Tobacco - No
  Sex - Yes
  Safety/Accidents - No
Description - Interactive books allow students to learn about sexual abstinence, contraception, and STD's while practicing decision making.

Title - **Sexually Transmitted Diseases**
Publisher - Enslow Publishers
Format - Hardcover book
Audience - Normal adolescents
Age - Grades 7 - 12
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - No
  Alcohol - No

Drugs - No
Tobacco - No
Sex - Yes
Safety/Accidents - No
Description - This book speaks frankly to teenagers and provides them with up-to-date information about AIDS and other STD's, their prevention and treatment.

Title - **Smile, You're Worth It!**
Publisher - Network Publications
Format - Teacher's guide and student worksheets
Audience - Normal upper elementary and middle school students
Age - Grades 4 - 9
Emphasis/Approach - Prevention; Focus on building self-esteem
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - No
Alcohol - No
Drugs - No
Tobacco - No
Sex - No
Safety Accidents - No
Description - Activities to build self-esteem such as visualization, role-playing and learning about famous people who might serve as role models.

Title - **Survival Reading for Health**
Publisher - J. Weston Walch
Format - Masters and other print materials
Audience - Secondary special education students
Age - Grades 7 - 12
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
Risk Behavior (Unspecified) - No
Total Health - Yes
Alcohol - Yes
Drugs - Yes
Tobacco - Yes
Sex - No
Safety/Accidents - Yes
Description - Provides basic health and safety instruction with an emphasis on survival reading.

Title - **Take Care of Yourself**
Publisher - Quercus, A division of Globe Book Co., Inc.
Format - Student workbook
Audience - Secondary special education students
Age - Grades 7 - 12
Emphasis/Approach - Prevention; Expanding information base

Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - Yes
- Alcohol - Unknown
- Drugs - Unknown
- Tobacco -Unknown
- Sex - Yes
- Safety/Accidents - Yes

Description - Instructional material for teaching health and safety with an emphasis on nutrition, hygiene, family life, first aid, physical fitness and STD's. 2nd grade reading level.

Title - **Teaching AIDS - A Resource Guide on Acquired Immune Deficiency Syndrome**
Publisher - Network Publications
Format - Curriculum guide
Audience - Normal adolescents
Age - Grades 7 - 12
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - No
- Drugs - No
- Tobacco - No
- Sex - Yes
- Safety/Accidents - No

Description - Current information, teaching plans, activities, and masters useful for teaching about AIDS and its prevention.

Title - **Teaching Safer Sex**
Publisher - Planned Parenthood of Bergen County, NJ
Format - Curriculum guide
Audience - Normal adolescents
Age - Grades 9 - 12
Emphasis/Approach - Intervention; Focus on refusal skills; Expanding information base
Behaviors Covered -
- Risk Behavior (Unspecified) - No
- Total Health - No
- Alcohol - No
- Drugs - No
- Tobacco - No
- Sex - Yes
- Safety/Accidents - No

Description - Designed to provide sexually active adolescents with the knowledge and skills they need to practice safer sex.

Title - **Teen Suicide: A Book for Friends, Family and Classmates**
Publisher - Lerner Publications Co.
Format - Hardcover book
Audience - Normal adolescents
Age - Grades 7 - 12
Emphasis/Approach - Prevention; Expanding information base; Strong emotional appeal
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - No
  Alcohol - No
  Drugs - No
  Tobacco - No
  Sex - No
  Safety/Accidents - No
  Other - Suicide
Description - Provides information on signs of impending suicide, helping after a suicide attempt, and coping with suicide through stories of 6 teenagers affected by suicide.

Title - **Teenage Health Teaching Modules**
Publisher - Education Development Center, Inc.
Format - Teacher's manual and other print materials
Audience - Normal adolescents
Age - Unknown
Emphasis/Approach - Prevention; Emphasis on decision making skills; Focus on refusal skills; Expanding information base
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - Yes
  Alcohol - Yes
  Drugs - Yes
  Tobacco - Yes
  Sex - No
  Safety/Accidents - Yes
Description - This is a comprehensive health curriculum which covers: growth and development in the teen years; eating well and physical fitness; relationships with family and friends; handling stress; improving health and safety at work and in the world; and the risk behaviors identified above.

Title - **Teens and AIDS: Why Risk It?**
Publisher - Network Publications
Format - Trifold pamphlet
Audience - Normal adolescents

Age - Grades 7 - 12
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - No
  Alcohol - No
  Drugs - No
  Tobacco - No
  Sex - Yes
  Safety/Accidents - No
Description - Pamphlet provides adolescents with the basic information they need to avoid AIDS.

Title - **Thinking It Through**
Publisher - Research Press, Inc.
Format - Curriculum and facilitator's guide
Audience - Secondary special education students and developmentally disabled adults
Age - Grades 7 - Adult
Emphasis/Approach - Prevention; Emphasis on decision making skills
Behaviors Covered -
  Risk Behavior (Unspecified) - Yes
  Total Health - Unknown
  Alcohol - Unknown
  Drugs - Unknown
  Tobacco - Unknown
  Sex - Unknown
  Safety/Accidents - Unknown
Description - A training program to teach social problem solving.

Title - **Toxic Substances and You**
Publisher - J. Weston Walch
Format - Print materials - Spirit and blackline masters
Audience - Secondary special education students
Age - Grades 7 - 12
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
  Risk Behavior (Unspecified) - No
  Total Health - No
  Alcohol - Yes
  Drugs - Yes
  Tobacco - Yes
  Sex - No
  Safety/Accidents - No
Description - Work and information sheets which are intended for use in activity packets.

Title - **Understanding AIDS**
Publisher - Lerner Publication Co.
Format - Hardcover book
Audience - Normal upper elementary school students
Age - Grades 4 - 6
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - No
    Drugs - No
    Tobacco - No
    Sex - Yes
    Safety/Accidents - No
Description - This book explains AIDS through 7 short stories, followed by a summary and questions and answers on the relevant topic (e.g. drug abuse, hemophilia).

Title - **What is Safer Sex?**
Publisher - Network Publications
Format - Trifold pamphlet
Audience - Normal adolescents
Age - Grades 9 - 12
Emphasis/Approach - Prevention; Expanding information base
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - No
    Drugs - No
    Tobacco - No
    Sex - Yes
    Safety/Accidents - No
Description - Pamphlet provides adolescents with the basic information about safe sex they need to avoid AIDS.

Title - **Why Can't Anyone Hear Me?**
Publisher - Monroe Press
Format - Paperback book and teacher's guide
Audience - Normal upper elementary and middle school students
Age - Grades 7 - 12
Emphasis/Approach - Prevention; Focus on building self-esteem
Behaviors Covered -
    Risk Behavior (Unspecified) - No
    Total Health - No
    Alcohol - No
    Drugs - No
    Tobacco - No
    Sex - No
    Safety/Accidents - No

Description - Helps adolescents understand themselves and others, improve their communication skills, and build stronger self-esteem.

Appendix E

Summary of Design Team Meeting

SUMMARY

DESIGN TEAM MEETING: DECEMBER 7, 1989

NIDRR-Funded SBIR Feasibility Study
Investigation of Interactive Technologies
For a Risky Behaviors Program
For Mildly Mentally Handicapped Youth

Meeting Participants:

Louise Appell, Macro Systems
Carolyn Harris, Macro Systems
Dave Keefe, IBM Educational Systems
Bob Korn, Video Software Associates
Elaine Robey, Macro Systems
Jay Sivin, Interactive Educational Systems Design
Kate Wholey, Macro Systems

A copy of the agenda for the meeting is attached. All participants received the agenda and an overview on the subject of adolescent risk behavior at the beginning of the meeting. Earlier mailings had provided consultant design team members with abstracts of important articles and a review of currently available products.

Following the greeting by Louise Appell, Elaine Robey presented an overview of what was found during the course of our investigations for the feasibility study. Specifically she discussed the formats, approaches, and content of currently available programs for preventing or modifying risk behaviors in adolescents.

Three major topics of discussion were identified for the meeting, including:

- Precisely define the audience
- Delimit content to be included
- Determine overall approach to be used to present the content

Because these topics are necessarily interconnected, the discussion changed frequently from one to another. Below is a reporting of the flow of discussion in the meeting followed by a summary presenting the consensus view.

DISCUSSION

- Some team members felt that it would be appropriate to broaden the audience to include not only students formally identified as mildly cognitively impaired, but also students, who because of cultural disadvantage or other factors, had limited academic skills. Furthermore, the only other known videodisc simulation whose goal is prevention of risk behavior is the Target Interactive Project, produced by the National State High School Association. This program, although it is quite well done, targets a principally white, middle class normal high school population. It was felt that there are many other audiences for whom this particular product is not appropriate.

- It was suggested that it might be possible for this project to build a network for supplemental funding. The thinking was that additional funding, which would allow expansion of the scope of the project, might be available from outside sources. However, we believe that the anticipated NIDRR funding will be sufficient to develop a high quality product appropriate to the needs of the target audience which deals with at least one aspect of this complex multifaceted problem.

- Characteristics of the actors to be used were discussed, particularly the use of obviously handicapped actors. The consensus was that the use of handicapped actors is not necessary and possibly not appropriate given the nature of the handicapping conditions of the target audience and the possibility of expanding its use to other audiences not formally identified as handicapped.

- Setting for the visual presentation, that is urban, suburban, or rural, was discussed. The consensus was that equipment for delivery is more likely to be available in urban or big city suburban areas. Therefore, it seems that the product should be targeted toward urban and large city suburban adolescents.

- The racial makeup of the specific target audience was discussed. It was mentioned that there is a nationwide shortage of instructional designers who are members of minority groups, and that this absence of minority input in the design process at times results in products which are not relevant for minority group audiences. It was suggested that input be gotten from groups in the community who work closely with minority group youth, particularly schools and youth programs which feature computer use in their programs.

- The possibility of including a Spanish track on the videodisc was discussed. However, the question arose as to whether dubbing would be acceptable to the Hispanic community. It was generally agreed that actually filming two versions - Spanish and English - would probably be prohibitively expensive.

- The most appropriate age range for the target audience was discussed. It was felt, based upon the higher effectiveness rates of prevention programs for younger students, that upper elementary and middle school students are the most appropriate audience. More specifically, this would include students in grades 5 or 6 through 8. The effect of handicapping condition on content and approach for this group were discussed. It was felt that it is extremely important to keep in mind the anticipated developmental level of students in the target population, designing the instruction so that it is developmentally appropriate.

- Discussion turned to the most appropriate prototype characters given the target audience as defined to this point. It was felt that it will be important to have a variety of types, so that all students will be able to identify themselves with one of them. In particular, it was felt that it is important to ensure that characters reflect the values of a variety of racial/ethnic communities. One way to do this is to talk with people actively working with minority youth, such as the Shiloh Family Life Center program for male youth located in Washington, DC. It was also felt that it is important to address the wide range in physical maturity during the upper elementary and middle school years. The issues faced by the physically mature student will be different than for the physically immature, regardless of level of intellectual maturity. It was agreed that characters in the 7th to 8th grade age would work best because they would not "turn off" older students and would be admired by younger students.

- A variety of visual approaches which might be appropriate for the audience were discussed. This included having the selected character essentially "be" the camera and having the selected character turn to the camera (student user of the program) at a decision point to say "What should I do?" Closely related to this is the idea of having some sort of "Jiminy Cricket" character who interrupts the flow of action when a decision is made and asks "Are you sure you want to do that? Don't you know that.....?"

- The possibility of including both drug related and sex related risk behaviors in this program was discussed. It was felt that the sex related behaviors were certainly appropriate in a program which focused on decision making and other skills, but that there were two important reasons for not extending into this area: First, there probably would not be room on the disc to adequately cover both. Furthermore, the subject matter is much more controversial and would perhaps result in limited use of the disc, including its drug behaviors components.

- Several videodiscs with other content but interesting approaches were discussed including the Jacques Lipschitz disc and a cancer patient education disc developed by Susan Evans and Peter Clark from the Annenberg School of Communication. The Lipschitz disc makes use of artificial intelligence technology to interpret questions typed in on the keyboard. Lipschitz response to the question comes from the videodisc. The cancer patient education disc consists of four modules: cosmetic effects, medication and treatment, feelings, and a module directed at the patient's significant other. It allows a high level of user control which has been found to be very emotionally satisfying for cancer patients who feel they have no control.

- Discussion turned to the importance of building self-esteem in any program for preventing or modifying risk behaviors. There was some concern that self-esteem issues might be different depending upon presence or absence of a handicapping condition and socioeconomic status. It was felt that it was important to investigate this further before developing any self esteem building program component. However, it was mentioned by one team member that there is some evidence that nature of the interactive videodisc medium -- the opportunities it presents for taking control and making good decisions -- may in itself contribute to building self-esteem in the user.

- It was agreed that the subject matter for the disc certainly lends itself to a simulation approach. A brainstorming session about the nature of the simulations followed. Among ideas brought up during this discussion were the following:

    - A "Back to the Future" approach might be useful. In simulations using this approach, the character might initially be depicted at a point when many problems resulting from engagement in risk behaviors are apparent. The student might have the opportunity to go back in time and observe the decisions made by the character which led to the current situation. Then, the student might have the opportunity to go back in time and make decisions which would alter the eventual outcome.

    - It was felt that characters should definitely be fictional, not real life personalities.

  - It was felt that the primary focus should be on the scenarios which provide opportunities for decision making, but that there should also be access to a decision making tool to provide help in the decision making process.

  - The possibility of including a health profile tool similar to some currently available in basic CAI as stand alone programs was discussed. It was felt that this tool could be useful for its own sake or possibly as a means of customizing the program based on a student's answers to health assessment questions when first entering the program.

- It was agreed that it will be necessary to identify those situations and experiences which place students at highest risk for initial substance use. In addition, some consideration was given to the possibility of having students identify possible high risk situations, interrupting the flow of the problem to explore why the situation is high risk, etc.

  - Other tools might also be made available to the student at various times in the program including tools presenting strategies on refusal and coping skills, and a data base containing information relevant to making decisions in the area of risk behaviors. The feeling was that the coping skills tool is quite important. This will allow presentation of information about ways to feel good other than through substance abuse or premature sexual activity. Some or all of these tools might be available up front when the student first enters the program as well as during the simulations.

  - The degree to which the goals of the program will be made explicit during the course of the instruction was discussed. Generally, it was felt that for the target audience, the goal should be explicit and the instruction a combination of the consequences of decisions (implicit) and the development of skills and expansion of information base which will increase the likelihood of remaining remain drug-free (explicit).

- Further discussion of the now-then dimension began. Two presentation modes seemed possible: Present the now and have simulations lead to the future for a character chosen by the student, or; present somewhat older characters and have students select one and try to figure out how he got to where they want to be. The perspective here is: What do you think he chose? The feedback might be in the form of "Yes, that's what I chose because..." or "No, I chose this because....."

- Discussion moved to the question of how far into the future we needed to go. Since short term consequences of risk behaviors have been shown to be more of a deterrent than long term consequences, it seems appropriate to go no more than a few years into the future.

- The possibility of having students choose a character for whom they can make decisions was discussed. Some technical aspects surrounding the use of multiple characters were discussed including the possibility of introducing characters via snapshots and audio rather than live action.

- The number of decision points and amount and length of video were discussed briefly, but it was felt that these needed to be dealt with at a future time when we have a clearer understanding of overall content and structure. However, it was felt that it is important that the consequences presented for "good" choices be just as exciting and attractive to the audience as the consequences of "bad" choices.

- Another way in which the simulations might work is this: The student makes decisions and the simulation proceeds without feedback other than the consequences of the choices made. At the end of a series of decisions (perhaps leading to some climax), the scenes would be replayed for the student. This time, however, the student would be prompted to think about the decisions with questions like: Why did you choose that? Did you consider...?

- Still another possibility is that each decision point is a simple yes/no response (with help available). When the student makes the choice, before the program proceeds, the student will be presented a list of reasons for the selection. The student could select as many as applied. Based on the selections, the student might then get customer tailored feedback before the simulation resumed.

- The possibility of increasing the severity of the consequences if a pattern is detected was discussed. In other words, if the student chose to take a drink one time, but then refused offers of substances on subsequent occasions, the consequences would be minimal -- as they usually are in the real world. If however, the student repeatedly chose to engage in substance use, then the student might experience some very negative outcomes -- such as loss of friends or girlfriend/boyfriend, loss of valued personal possessions, accidents, etc.

- The possibility of repurposing an existing movie videodisc (like Dan Nix and Temple University are doing) came up. The advantage of this is that you can develop the program and tell the schools to go out and spend $19.95 for the movie to be used with the software. However, it was felt that repurposing would not allow us to do what we needed to do, particularly for the target audience, for whom having text screens voiced and a high degree of interactivity is extremely important.

- The possibility of using existing footage of real personalities to demonstrate the long term consequences of risk behavior was suggested. For example existing footage of Nat King Cole and Yul Brynner making pleas for nonuse of cigarettes is known to exist. These could be accessed through some sort of "zoom to the future" feature which might be part of the database. It was also suggested that interviews with successful people, describing pivotal decision points in their lives might be included in a similar way. Clips like these can make strong appeals to the viewers emotions, while at the same time clarifying the overall message of the program.

- The question of what print materials would accompany the simulation was discussed. However, no definite conclusions, other than basic documentation which describes the purpose and operation of the program, were reached.

- There was some discussion that this disc might be used as an assessment tool to determine students' standing with regard to decision making, refusing and coping skills. However, some concern was expressed that the detailed record keeping required for this purpose might not be appropriate given the sensitive nature of the material. It was suggested that one way around this would be simply to count the number of times the various tools (decision making, information, refusal skills, etc.) were accessed.

- Closely related to this is the question of whether to include customization options for local users such as the possibility of disabling some content or adding information about local resources. It was generally felt that this would be appropriate and might be necessary.

- There was also discussion of how this program would most profitably be used: by a single individual, a small group, or for whole class instruction. The team agreed that individual student or small group use would be most appropriate, but that it might possibly be used as a stimulus for whole class interaction, like some software from Tom Snyder Productions.

CONCLUSIONS

The most likely audiences, based both on need and on current status and short term projections of availability of equipment, would appear to be in cities and in suburbs surrounding large cities. This makes it especially important to consider multicultural audiences as the program is developed.

It seems most appropriate to target this program toward upper elementary (grades 5 and/or 6) through middle school age students (grade 8) mildly mentally handicapped students. However, it is felt that the program might be very appropriate for other at risk students, particularly those with low academic skills.

The program will be developed to maximize its usefulness by individual students and/or small groups. However, consideration will be given to the possibility of using it with large groups.

It is not necessary to include characters with obvious handicapping conditions in the program. However, the characters should represent a broad range of interests and abilities so that each student using the program will find a character with whom s/he can identify.

The content area on which the program will focus is risk behaviors involving substance use and abuse. The primary purpose will be the development of good decision making and other skills which may lessen the student's chances of becoming involved in substance abuse and improve the chances of healthy social-emotional development.

It was agreed that the subject matter for the disc certainly lends itself to a simulation approach. It was felt that the primary focus should be on the scenarios which provide opportunities for decision making, but that there should also be access to some kind of decision making tool to provide help in the decision making process.

Other tools might also be made available to the student at various times in the program. These could include tools presenting information and strategies for refusal and coping skills, and a data base containing information relevant to making decisions in the area of risk behaviors. Some or all of these tools might be available up front when the student first enters the program as well as during the simulations.

Below is a very tentative visual model of the structure of the program:

Tool - Refusal Skills

Now

Then

SIMULATIONS

Tool - Coping Skills

Tool - Database

Tool - Decision Making Skills